Received
June 5, 2020
WV DEP/Div of Air Quality

Division of Air Quality Permit Application Submittal

Please find attached a permit application for : Steel of West Virginia, Inc. - Huntington Facility
[Company Name; Facility Location]

- DAQ Facility ID (for existing facilities only): 011-00009
- Current 45CSR13 and 45CSR30 (Title V) permits associated with this process (for existing facilities only): R30-01100009-2015

- Type of NSR Application (check all that apply):
  - ☐ Construction
  - ☐ Modification
  - ☐ Class I Administrative Update
  - ☐ Class II Administrative Update
  - ☐ Relocation
  - ☐ Temporary
  - ☐ Permit Determination

- Type of 45CSR30 (TITLE V) Application:
  - ☐ Title V Initial
  - ☑ Title V Renewal
  - ☐ Administrative Amendment**
  - ☐ Minor Modification**
  - ☐ Significant Modification**
  - ☐ Off Permit Change

****If the box above is checked, include the Title V revision information as ATTACHMENT S to the combined NSR/Title V application.**

- Payment Type:
  - ☐ Credit Card (Instructions to pay by credit card will be sent in the Application Status email.)
  - ☑ Check (Make checks payable to: WVDEP – Division of Air Quality)
    Mail checks to:
    WVDEP – DAQ – Permitting
    Attn: NSR Permitting Secretary
    601 57th Street, SE
    Charleston, WV 25304

Please wait until DAQ emails you the Facility ID Number and Permit Application Number. Please add these identifiers to your check or cover letter with your check.

- If the permit writer has any questions, please contact (all that apply):
  - ☑ Responsible Official/Authorized Representative
    - Name: John P. O'Connor, Vice President - Administration
    - Email: joconnor@swvainc.com
    - Phone Number: 304.696.8200
  - ☑ Company Contact
    - Name: Tyler Perry, Manager - Environmental, Health & Safety
    - Email: tperry@swvainc.com
    - Phone Number: 304.962.6076
  - ☑ Consultant
    - Name: Christi M. Wilson, Trinity Consultants - Principal Consultant
    - Email: cwilson@trinityconsultants.com
    - Phone Number: 724.935.2611

TITLE V PERMIT APPLICATION CHECKLIST FOR ADMINISTRATIVE COMPLETENESS

A complete application is demonstrated when all of the information required below is properly prepared, completed and attached. The items listed below are required information which must be submitted with a Title V permit application. Any submittal will be considered incomplete if the required information is not included.*

☑	A signed copy of the application ("Certification" page must be signed and dated by a Responsible Official as defined in 45CSR30) See Section 6 of Project Report
☑	*Table of Contents (needs to be included but not for administrative completeness) See TOC in Project Report
☑	Facility information See Section 1 of Project Report
☑	Description of process and products, including NAICS and SIC codes, and including alternative operating scenarios See Section 1 of Project Report
☑	Area map showing plant location See Attachment A
☑	Plot plan showing buildings and process areas See Attachment B
☑	Process flow diagram(s), showing all emission units, control equipment, emission points, and their relationships See Attachment C
☑	Identification of all applicable requirements with a description of the compliance status, the methods used for demonstrating compliance, and a Schedule of Compliance Form (ATTACHMENT F) for all requirements for which the source is not in compliance N/A
☑	Listing of all active permits and consent orders (if applicable) See Section 6 of Project Report
☑	Facility-wide emissions summary See Attachment I
☑	Identification of Insignificant Activities See Section 6 of Project Report
☑	ATTACHMENT D – Title V Equipment Table completed for all emission units at the facility except those designated as insignificant activities
☑	ATTACHMENT E – Emission Unit Form completed for each emission unit listed in the Title V Equipment Table (ATTACHMENT D) and a Schedule of Compliance Form (ATTACHMENT F) for all requirements for which the emission unit is not in compliance
☑	ATTACHMENT G – Air Pollution Control Device Form completed for each control device listed in the Title V Equipment Table (ATTACHMENT D)
☑	ATTACHMENT H – Compliance Assurance Monitoring (CAM) Plan Form completed for each control device for which the "Is the device subject to CAM?" question is answered "Yes" on the Air Pollution Control Device Form (ATTACHMENT G)
☑	General Application Forms signed by a Responsible Official See Section 6 of Project Report
☐	Confidential Information submitted in accordance with 45CSR31 N/A

PROJECT REPORT

Steel of West Virginia / Huntington Facility

Title V Operating Permit Renewal Application

Prepared By:

Stephanie Miller – Senior Consultant
Christi Wilson – Principal Consultant

TRINITY CONSULTANTS
4500 Brooktree Road
Suite 310
Wexford, PA 15090
724.935.2611

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Project No. 203901.0079

Trinity Consultants

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1. EXECUTIVE SUMMARY

Steel of West Virginia, Inc. (SWVA) operates a steel manufacturing plant in Huntington, West Virginia. The Huntington Facility is an existing major source of criteria pollutants currently operating in accordance with West Virginia Department of Environmental Protection (WVDEP) Division of Air Quality Title V operating permit R30-01100009-2015, last issued on December 8, 2015. The facility is categorized as a minor source of hazardous air pollutants (HAP).

The current Title V permit expires on December 8, 2020. SWVA is submitting this timely and complete permit renewal application by the renewal submission deadline of June 8, 2020 (i.e., six months before the expiration of the current permit) in accordance with Series 30, Section 4.1.a.3 of the West Virginia Department of Environmental Protection Division of Air Quality Code of State Rules (C.S.R.). Presuming WVDEP finds this application administratively complete, SWVA may continue to operate the Huntington Facility under an application shield in accordance with the terms of the existing Title V permit until the renewed permit is issued, even if this issuance would occur after the current permit's expiration date.

1.1 Facility Description

SWVA manufactures hot-rolled steel products covered by Standard Industrial Classification (SIC) Code 3312. The facility has the potential to operate 24 hours per day, 7 days per week, and 52 weeks per year. The main emission sources at the facility include two electric arc furnaces (EAFs), two rolling mills, and ancillary equipment and activities. The manufacturing steps include melting scrap steel, casting billets, reheating and hot rolling the billets, shot blasting, welding, punching and shearing. The facility is a major source of carbon monoxide (CO), nitrogen oxides (NOX), and particulate matter (PM) under the Title V program as the potential to emit each of these criteria pollutants is greater than 100 tons per year (tpy). The facility is a natural minor source of hazardous air pollutants (HAPs) as potential emissions are below 10 tpy for each individual HAP and less than 25 tpy for total HAPs.

1.2 Application Contents

This Title V operating permit renewal application contains the following elements:

- Section 2 – Overview of regulatory applicability for facility operations
- Section 3 – Description of proposed changes to the permit
- Section 4 – Description of updates to potential to emit calculations
- Section 5 – Request for Permit Application Shield
- Attachment A – Title V General Form
- Attachment B – Area Map & Plot Plan
- Attachment C – Process Flow Diagrams
- Attachment D – Title V Equipment Table
- Attachment E – Emission Unit Forms
- Attachment F – Schedule of Compliance Form *(Not Applicable)*
- Attachment G – Air Pollution Control Device Forms
- Attachment H – Compliance Assurance Monitoring (CAM) Plan Form *(Not Applicable)*
- Attachment I – Facility-Wide Emissions Calculations
- Attachment J – Insignificant Activities

2. REGULATORY APPLICABILITY

A key objective of a Title V operating permit (TVOP) application is to compile all applicable Clean Air Act-derived requirements into one document. The requirements can be categorized as: (1) emission limits and work practice standards; and (2) testing, monitoring, recordkeeping, and reporting requirements. To compile a list of the requirements applicable to a facility, it is first necessary to determine which Federal and State air regulations apply to the facility as a whole, or to individual emission units. This section documents the applicability determinations made for Federal and State air quality regulations. Regulations potentially applicable to the Huntington Facility are detailed in the "Applicable Requirements" forms in Attachment E.

Additional details on applicability for several regulations are presented in this section. Specifically, the remainder of this section summarizes the air permitting requirements and key air quality regulations that apply to the operation of the Huntington Facility. Applicability or non-applicability of the following regulatory programs are addressed:

- Major New Source Review (NSR) Source Classification;
- Title V of the 1990 Clean Air Act Amendments;
- New Source Performance Standards (NSPS);
- National Emission Standards for Hazardous Air Pollutants (NESHAP);
- Compliance Assurance Monitoring (CAM);
- Risk Management Plan (RMP);
- West Virginia State Implementation Plan (SIP) regulations.

This review is presented to supplement and/or add clarification to the information provided in the WVDEP Title V application forms, which fulfill the requirement to include citations and descriptions of applicable statutory and administrative code requirements.

In addition to providing a summary of applicable requirements, this section of the application also provides non-applicability determinations for certain regulations, allowing the WVDEP to confirm that identified regulations are not applicable to the Huntington Facility. Note that explanations of non-applicability are limited to those regulations for which there may be some question of applicability specific to the operations at the Huntington Facility. Regulations that are categorically non-applicable are not discussed (e.g., *NSPS Subpart J, Standards of Performance for Petroleum Refineries*).

2.1 Major New Source Review Source Classification

The Federal NSR construction permitting program regulates installation of new major stationary sources or major modifications of existing major sources on a pollutant-by-pollutant basis. The Prevention of Significant Deterioration (PSD) regulates pollutants located in areas that are in attainment with the National Ambient Air Quality Standards (NAAQS), while the Non-Attainment New Source Review (NNSR) program regulates pollutants located in non-attainment areas.

This facility is located in Huntington, Cabell County, West Virginia, which is currently designated as attainment for all pollutants under the NAAQS. As such, the facility is potentially subject to PSD requirements for all pollutants. The Huntington Facility is an existing major source with respect to the PSD program since its potential emissions for at least one regulated pollutant are above the PSD major source thresholds (i.e., CO). Because the Title V permit renewal process is not intended to accommodate any changes or modifications to the facility that are not currently permitted at the facility, NSR/PSD permitting is

not triggered by this activity but could be triggered by future activities at the site. There have been no significant modifications to the Huntington Facility and no changes in the area's attainment status during the term of the current Title V permit.

2.2 Title V Operating Permit Program

Title 40 of the Code of Federal Regulations Part 70 (40 CFR 70) establishes the federal Title V operating permit program. West Virginia has incorporated the provisions of this federal program in its Title V operating permit program in 45 C.S.R. 30. The major source thresholds with respect to the West Virginia Title V operating permit program regulations are 10 tpy of a single HAP, 25 tpy of any combination of HAPs, and 100 tpy of all other regulated pollutants. The potential emissions of NO_X, CO, and PM at the facility are above the 100 tpy threshold. Therefore, the Huntington Facility is classified as a major source for Title V purposes. The Huntington Facility is an existing major source of criteria pollutants currently operating in accordance with West Virginia Department of Environmental Protection (WVDEP) Division of Air Quality Title V operating permit R30-01100009-2015, last issued on December 8, 2015. SWVA is submitting this timely and complete permit renewal application by the renewal submission deadline of June 8, 2020 (i.e., six months before the expiration of the current permit) in accordance with Series 30, Section 4.1.a.3. With the timely and complete submittal of this renewal application, SWVA specifically requests that the Huntington Facility be authorized to continue operation under an application shield in accordance with the terms of the existing Title V permit until the renewed permit is issued, even if this issuance would occur after the current permit's expiration date.

2.3 New Source Performance Standards

New Source Performance Standards (NSPS), located in 40 CFR 60, require new, modified, or reconstructed sources to control emissions to the level achievable by the best demonstrated technology as specified in the applicable provisions. Moreover, any source subject to an NSPS is also subject to the general provisions of NSPS Subpart A, except where expressly noted. The following is a summary of applicability and non-applicability determinations for NSPS regulations of relevance to Huntington Facility.

2.3.1 NSPS Subparts D, Da, Db, and Dc – Steam Generating Units

These subparts apply to steam generating units of various sizes, all greater than 10 MMBtu/hr. For units greater than 100 MMBtu/hr (which would include the existing Reheat Furnace #2, EU016), Subpart Db potentially applies. For units between 10 MMBtu/hr and 100 MMBtu/hr (which would include the existing Reheat Furnace #1, EU014), Subpart Dc potentially applies. Subparts Db and Dc define steam generating unit as "a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium." The existing natural gas-fired reheat furnaces are direct fired (i.e., the heat from natural gas combustion will be used directly to heat the steel billets), and are not used to generate steam or for a heat transfer medium. As such, these furnaces are not subject to the requirements of NSPS Subparts Db or Dc. There have been no new steam generating units constructed at the facility during the term of the current permit.

2.3.2 NSPS Subparts K, Ka, and Kb – Standards of Performance for Petroleum Liquid Storage Vessels

These subparts apply to storage tanks for petroleum and other organic liquids of various sizes (the smallest of which is 19,813 gallons) built after specified dates. The Huntington Facility has several small storage tanks containing diesel, gasoline, hydraulic oil, and used oil. The largest of these tanks is 5,000 gallons in capacity. There have been no new storage tanks constructed at the facility during the term of the current

permit. As such, there are no storage tanks at the Huntington Facility that are subject to requirements under NSPS Subparts K, Ka, or Kb.

2.3.3. NSPS Subparts N and Na – Standards of Performance for Basic Oxygen Process Furnaces

These subparts apply to basic oxygen process steelmaking furnaces constructed or modified after 1973. The steelmaking furnaces at the Huntington Facility are electric arc furnaces that do not meet the definition of basic oxygen process under 40 CFR §60.141. As such, this subpart does not apply.

2.3.4. NSPS Subparts AA and AAa – Standards of Performance for Steel Plants: Electric Arc Furnaces

These subparts apply to EAFs and dust handling systems. The Melt Shop at the Huntington Facility (containing the existing EAFs and associated baghouses) were constructed prior to October 21, 1974 and have not been modified or reconstructed as defined under 40 CFR 60.3 and thus are not subject to these subparts.

2.3.5. NSPS Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Subpart IIII applies to manufacturers, owners, and operators of stationary compression ignition (CI) engines constructed, reconstructed, or modified after July 11, 2005. Applicable requirements for individual engines differ depending on the manufacture date, size, and use of the engine. The Huntington Facility operates one (1) compression ignition, diesel-fired emergency generator engine. The engine was installed in 1996 and has not been modified or reconstructed as defined in 40 CFR 60. As such, NSPS Subpart IIII does not apply.

2.3.6. NSPS Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Subpart JJJJ applies to manufacturers, owners, and operators of stationary spark ignition (SI) engines constructed, reconstructed, or modified after June 12, 2006. Applicable requirements for individual engines differ depending on the manufacture date, size, and use of the engine. The Huntington Facility operates two (2) natural gas-fired emergency generator engines: (1) a 254.3-HP engine installed in 2010 (EU035); and (2) a 268-HP engine installed in 2013 (EU036). As such, the Huntington Facility is subject to recordkeeping, reporting, maintenance, performance testing, and operation using good air pollution control practices as described in this subpart. Applicable requirements of Subpart JJJJ are already addressed in the Title V permit conditions. There have been no changes and no new engines installed during the term of the current permit.

2.3.7. Non-applicability of Other NSPS

NSPS are developed for specific industrial source categories. Other than NSPS developed for primary metal industries specific to steel manufacturing, the applicability of a given NSPS to the Huntington Facility can be readily ascertained based on the industrial source category covered. All other NSPS are categorically not applicable to the facility. Furthermore, there have been no new NSPS subparts promulgated during the term of the current permit which apply to operations at the Huntington Facility.

2.4 National Emission Standards for Hazardous Air Pollutants

Part 63 National Emission Standards for Hazardous Air Pollutants (NESHAP) allowable emission limits are established on the basis of maximum achievable control technology (MACT) for HAP major sources and generally achievable control technology (GACT) for HAP area sources. A HAP major source is defined as having potential emissions in excess of 25 tpy for total HAPs and/or potential emissions in excess of 10 tpy for any individual HAP. The Huntington Facility has been and continues to be an area source of HAP.

NESHAP apply to sources in specifically regulated industrial source categories (Clean Air Act Section 112(d)) or on a case-by-case basis (Section 112(g)) for facilities not regulated as a specific industrial source type. In addition to 40 CFR 63 Subpart A (NESHAP Subpart A), which is similar to 40 CFR 63 Subpart A (NSPS Subpart A), several NESHAP could potentially apply to the Huntington Facility. The applicability of these NESHAP subparts is discussed in the following sections.

2.4.1. 40 CFR 63 Subpart ZZZZ – Reciprocating Internal Combustion Engines

40 CFR 63, Subpart ZZZZ (commonly referred to as the RICE MACT), applies to existing, new, reconstructed reciprocating internal combustion engines (RICE). The Huntington Facility has an emergency use 97-HP diesel-fired RICE that was installed in 1996 (EU034). The engine is classified in this rule as an existing emergency use CI RICE located at an area source of HAP. The Huntington Facility is required to comply with the applicable operating limitations and other requirements in this subpart, and to operate and maintain the affected source in a manner consistent with safety and good air pollution control practices for minimizing emissions. The applicable requirements of Subpart ZZZZ are already addressed in the Title V permit conditions. Note that the two natural gas-fired emergency generators (EU035 and EU036) are also subject to RICE MACT, but comply by meeting the requirements of NSPS Subpart JJJJ. The existing engines have not been modified or reconstructed, nor have any new engines been constructed, during the term of the current permit.

2.4.2. 40 CFR 63 Subpart DDDDD – Industrial, Commercial, and Institutional Boilers and Process Heaters

This MACT standard applies to industrial, commercial, or institutional boilers or process heaters as defined in 40 CFR §63.7575 that are located at, or part of, a major source of HAP. As mentioned previously, the Huntington Facility is not a major source of HAP, and therefore this subpart does not apply.

2.4.3. 40 CFR 63 Subpart YYYYY – Electric Arc Furnace Steelmaking Facilities

This MACT standard applies to Electric Arc Furnace Steelmaking Facilities at area sources of HAP. This NESHAP establishes standards for HAP emissions from EAFs and Argon Oxygen Decarburization (AOD) vessels. The existing EAFs at the Huntington Facility (EU006 and EU007) are subject to the requirements of Subpart YYYYY, and the applicable requirements were previously incorporated into the Title V permit during the last renewal. There have been no modifications to the furnaces or changes in the method of demonstrating compliance with Subpart YYYYY during the term of the current permit.

2.4.4. 40 CFR 63 Subpart CCCCCC – Gasoline Dispensing Facilities

This subpart establishes emission limitations and management practices for HAP emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF). The Huntington Facility has a small gasoline storage tank which is used to fuel motor vehicles. The monthly throughput of the tank is less than 10,000 gallons. As such, the facility must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. The applicable requirements of this subpart were

previously incorporated into the Title V permit during the last renewal. There have been no modifications to the facility or changes in the method of demonstrating compliance with Subpart CCCCCC during the term of the current permit.

2.4.5. 40 CFR 63 Subpart JJJJJJ – Industrial, Commercial, and Institutional Boilers

This MACT standard applies to industrial, commercial, and institutional boilers of various sizes and fuel types at an area source of HAP. The Huntington Facility does not currently operate any boilers. The existing reheat furnaces are classified as natural gas-fired process heaters, which are not regulated under the area source rule. Therefore, the Huntington Facility is not subject to requirements under Subpart JJJJJJ.

2.5 Compliance Assurance Monitoring

Under 40 CFR 64, the Compliance Assurance Monitoring (CAM) regulations, facilities are required to prepare and submit monitoring plans for certain emissions units with the initial or renewal Title V operating permit application. CAM Plans are intended to provide an on-going and reasonable assurance of compliance with emission limits for sources that utilize active control devices. The regulatory requirement for addressing CAM is to do so at the time of the first Title V Operating Permit Renewal. CAM applicability for the Huntington Facility was addressed accordingly during the time of the first Title V permit renewal. The Electric Arc Furnaces at the Huntington Facility (EU006 and EU007) are subject to CAM and as such must comply with the CAM plan that was previously established and which is referenced in Section 4.2 of the current permit. There have been no modifications to the furnaces or compliance monitoring methods during the term of the current permit.

2.6 Risk Management Plan

Subpart B of 40 CFR 68 outlines requirements for risk management plans pursuant to Section 112(r) of the Clean Air Act. Applicability of the subpart is determined based on the type and quantity of chemicals stored at a facility. SWVA has evaluated the amount of Section 112(r) substances stored at the Huntington Facility and has determined that there are no listed substances stored at quantities greater than the corresponding applicability threshold. Therefore, the facility is not subject to this regulation.

2.7 West Virginia SIP Regulations

The Huntington Facility is currently permitted under the regulations contained in West Virginia's Title 45 Legislative Rule Department of Environmental Protection Office of Air Quality (WVDEP regulations). A federal operating permit must be issued by the agency upon determination that the facility can reasonably be expected to comply with the WVDEP regulations and all applicable federal requirements. The Code of State Regulations fall under two main categories, those regulations that are generally applicable (e.g., permitting requirements), and those that have specific applicability (e.g., PM standards for manufacturing equipment). This section of the application highlights specific West Virginia State Implementation Plan (SIP) regulations that apply to the Huntington Facility. The following information has been retrieved directly from the WVDEP Fact Sheet (R30-01100009-2015) and verified through review of the associated regulations.

2.7.1. 45 CSR 2: To Prevent and Control Particulate Air Pollution Control from Combustion of Fuel in Indirect Heat Exchangers

45 CSR 2 establishes limitations for smoke and particulate matter from fuel burning units. The Continuous Wax Line Heater at the Huntington Facility is subject to an opacity limit under this ruling of no greater than 10 percent on a six-minute block average.

2.7.2. 45 CSR 4: To Prevent and Control the Discharge of Air Pollutants into the Open Air Which Causes or Contributes To an Objectionable Odor or Odors

According to 45 CSR 4-3:

No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.

The Huntington Facility is generally subject to this requirement. However, due to the nature of the process at the facility, production of objectionable odor from the Huntington Facility during normal operation is unlikely.

2.7.3. 45 CSR 6: To Prevent and Control Air Pollution from Combustion of Refuse

45 CSR 6 establishes emission standards and requirements for activities involving refuse incineration, as well as the prohibition of open burning. The Huntington Facility is generally subject to this requirement. However, there are no refuse incineration or open burning activities at the facility during normal operation.

2.7.4. 45 CSR 7: To Prevent and Control Particulate Matter Air Pollution from Manufacturing Process and Associated Operations

45 CSR 7 applies to the PM emissions from the manufacturing process. According to the definition of manufacturing processes:

"Manufacturing Process" means any action, operation or treatment, embracing chemical, industrial or manufacturing efforts, and employing, for example, heat treating furnaces, by-product coke plants, core-baking ovens, mixing kettles, cupolas, blast furnaces, open hearth furnaces, heating and reheating furnaces, puddling furnaces, sintering plants, electric steel furnaces, ferrous and non-ferrous foundries, kilns, stills, driers, crushers, grinders, roasters, and equipment used in connection therewith and all other methods or forms of manufacturing or processing that may emit smoke, particulate matter or gaseous matter.

The individual sources at the Huntington Facility that contribute to the manufacturing process are subject to this regulation.

2.7.5. 45 CSR 10: To Prevent and Control Air Pollution from the Emission of Sulfur Oxides

45 CSR 10 establishes allowable sulfur dioxide (SO_2) emission rates. SWVA's Electric Arc Furnaces and Reheat Furnaces are subject to SO_2 emission limitations of 2,000 parts per million by volume (ppmv), as outlined in Subparts 4.1a through 4.1b.

2.7.6. 45 CSR 11: Prevention of Air Pollution Emergency Episodes

45 CSR 11 states:

Any person responsible for the operation of a source of air pollutants not set forth under Section 5.1. of this rule shall, when requested by the Director, prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Table I, II, and III of this rule.

The Huntington Facility is generally subject to this rule and has a standby emission reduction plan prepared accordingly.

2.7.7. 45 CSR 13: Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation

45 CSR 13 establishes procedures for obtaining permits and associated actions for the construction, reconstruction, or modification of emission sources. Since the proposed project is for the renewal of a Title V operating permit, this regulation will not apply to this action.

2.7.8. 45 CSR 16: Standards of Performance for New Stationary Sources

This rule incorporates the federal NSPS regulations promulgated in 40 CFR Part 60 by reference. The Huntington facility is subject to this rule since it is subject to NSPS regulations.

2.7.9. 45 CSR 21: Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds

45 CSR 21 applies to the manufacture, mixing, storage, use, or application of volatile organic compounds (VOC) and applies to sources in Putnam County, Kanawha County, Cabell County, Wayne County, and Wood County. The Huntington Facility is located in Cabell County and its paint application, wax application, and cold cleaner processes are subject to the limitations, recordkeeping, and reporting requirements of this regulation.

2.7.10. 45 CSR 29: Rule Requiring the Submission of Emission Statements for Volatile Organic Compound Emissions and Oxides of Nitrogen Emissions

According to 45 CSR 29:

This rule requires the submission of an emission statement from owners and operators of stationary sources emitting volatile organic compounds (VOCs) or oxides of nitrogen (NOx). Facilities with less than 25 tons per year of plant-wide actual VOC or NOx emissions are exempt from the requirements of this rule if such sources are included in the Director's base-year and periodic emissions inventories. This rule applies only to stationary sources located in Putnam, Kanawha, Cabell, Wayne, Wood, and Greenbrier Counties.

The Huntington Facility is located in Cabell County and emits greater than 25 tpy of NO_X. As such, the facility must submit an annual emissions statement to the Director.

2.7.11. 45 CSR 30: Requirements for Operating Permits

45 CSR 30 establishes the permitting system for Title V permits. The Huntington Facility is subject to this general requirement due to its status as a major source of emissions under Title V of the Clean Air Act. The

facility is subject to the monitoring and recordkeeping requirements outlined in subpart 5.1.c. of this regulation.

2.7.12. 45 CSR 34: Emission Standards for Hazardous Air Pollutants

This rule incorporates the federal NESHAP regulations promulgated in 40 CFR Parts 61 and 63 by reference. The Huntington facility is subject to this rule since it is subject to NESHAP regulations.

2.7.13. 45 CSR 42: Greenhouse Gas Emissions Inventory Program

45 CSR 42, the Greenhouse Gas Emissions Inventory Program, was repealed as of June 1, 2012. Reporting of greenhouse gas emissions now falls under the authority of 40 CFR Part 98: Mandatory Greenhouse Gas Reporting. As such, the Huntington Facility is no longer subject to 45 CSR 42, but is required to comply with the greenhouse gas reporting requirements of 40 CFR 98.

2.7.14. Non-Applicability of Other SIP Rules

A thorough examination of the West Virginia SIP rule applicability to Huntington Facility reveals many SIP regulations that do not apply or impose additional requirements on operations. Such SIP rules include those specific to a particular type of industrial operation that is categorically not applicable to the Huntington Facility.

3. PROPOSED CHANGES TO OPERATING PERMIT

As part of the Title V operating permit renewal application development process, SWVA has reviewed their current operating permit to confirm whether any of the following changes have occurred:

- Removal of equipment no longer in service.
- Addition of equipment not included in the TVOP.
- Applicability of new requirements promulgated since the issuance of the current permit.
- Other miscellaneous administrative changes that affect the permit.

3.1 Equipment to be Removed from Operating Permit

SWVA has removed Lime Bin #2 (EU004) from the facility. As such, SWVA requests that all applicable requirements for this emission unit be removed from the Title V permit. No other equipment has been removed from the facility during the term of the permit.

3.2 Equipment to be Added to Operating Permit and Updates to Existing Sources

SWVA has determined that there are no newly added sources of air emissions at the Huntington facility that are not currently identified in the TVOP.

SWVA requests the following corrections to the Melt Shop control device configuration to correct inaccurate representations in the current permit. Note that these updates are administrative in nature, and are not the result of any physical changes to the actual configuration of emission units or control devices associated with the Melt Shop operations. This correction does not impact any of the applicable requirements in the permit. The process flow diagrams and emission unit forms have also been revised accordingly to reflect the administrative updates, which are summarized below:

Table 3-1. Summary of Changes

Emission Unit ID	Emission Unit Description	Control Device
EU006	Electric Arc Furnace #1	CE008 West Baghouse
EU007	Electric Arc Furnace #2	CE006 East Baghouse
EU008	Electric Arc Furnace Canopy Hood	CE007 Wheelabrator/Auxiliary Baghouse CE006 East Baghouse CE008 West Baghouse
EU003	Lime Bin #1 (Fugitive Emissions)[1]	CE007 Wheelabrator/Auxiliary Baghouse CE006 East Baghouse CE008 West Baghouse

[1] Emissions from loading of the lime bin are control by a bin vent filter. Fugitive emissions from material transfer are collected by the melt shop canopy hood, which is controlled by CE006, CE007, and CE008.

3.3 Updates to Facility-Wide PTE

SWVA has updated the site-wide potential emissions calculations to reflect all permitted and insignificant/miscellaneous sources at the site, as well as the most up-to-date facility data and published emission factors. The updated PTE calculations included in Attachment I of this application show VOC as non-methane/non-ethane hydrocarbon (NMNEHC) inclusive of formaldehyde (HCHO) to be consistent with the regulatory definition of VOC.

3.4 New Requirement Applicability

SWVA has confirmed that no new applicable air quality requirements for the sources at the Huntington Facility have been promulgated by EPA or WVDEP during the term of the current permit.

4. POTENTIAL EMISSIONS CALCULATIONS

The characteristics of air emissions from the existing steel manufacturing operations, along with the methodology for calculating emissions, are briefly described in this section of the application. Detailed emission calculations, including references for all emission factors, are presented in Appendix I of this application.

- **Natural Gas Combusting Equipment:** (Includes Cutting Torches, Ladle Preheaters, Continuous Caster, Reheat Furnaces, Paint Oven, Wax Line Heater, Space Heaters, and Natural Gas-Fired Internal Combustion Engines). Potential emissions from units combusting natural gas of all criteria pollutants and HAPs are calculated using U.S. EPA's AP-42 factors for the metallurgical industry and/or for natural gas combustion as appropriate.

- **Fugitive Emission Sources of Particulate Matter:** (Includes Lime Bins and Ladle Refurbishing). Potential emissions from the lime bin and ladle refurbishing operations include particulate matter. Emissions were calculated using engineering estimates of emission factors and U.S. EPA's AP-42 factors for fugitive dust sources.

- **Baghouses:** Potential emission from the baghouses include all criteria pollutants and HAPs. Emissions for total PM and some HAPs were calculated based on stack testing. Emissions for other criteria pollutants and remaining HAPs were calculated based on AP-42 factors specific to iron and steel production.

- **Tundish Cleaning and Refurbishing:** Potential emissions for tundish cleaning and refurbishing include all criteria pollutants and HAPs. Emissions for criteria pollutants and HAPs from fuel combustion were calculated based on AP-42 factors for natural gas combustion. PM emissions from refurbishing were calculated using AP-42 factors for fugitive dust sources.

- **Sources of Particulate Matter:** (Includes Slag Handling and Continuous Caster). Potential emissions from slag handling and the continuous caster include particulate matter. PM emissions were calculated using AP-42 factors for iron and steel production.

- **Rolling Mills:** Potential emissions from the rolling mill include particulate matter. Emissions were calculated using site-specific emission factors. For the rolling mill reheat furnaces, process-related emissions were calculated using AP-42 factors from Chapter 12.5.

- **Paint and Wax Applications:** Potential emissions from paint application includes VOC and HAPs. Potential emissions from wax application includes VOC. Emissions were calculated using emissions factors provided on the Safety Data Sheet for the paint and wax.

- **Shot Blaster:** Potential emissions from the shot blaster includes particulate matter. PM emissions were calculated using site specific emission factors.

- **Welding:** Potential emissions from welding activities include particulate matter and HAPs. Emissions were calculated using AP-42 factors for electric arc welding.

- **Cold Cleaner:** Potential emissions from cold cleaners include VOC. Emissions were calculated using emission factors provided on the Safety Data Sheet for the cleaner.

- **Roads:** Potential emissions for roadway activity includes particulate matter. PM emissions were calculated using AP-42 emission factors for paved roads.

- **Cooling Towers:** Potential emissions from cooling towers include particulate matter. PM emissions were calculated using AP-42 factors for Wet Cooling Towers.

- **Melt Shop Fugitives:** Potential emissions from melt shop fugitives include particulate matter and HAPs. Emissions for particulate matter were calculated using AP-42 factors for Iron and Steel Production and control efficiencies of the canopy hood and melt shop building. Emissions for HAPs were calculated based on monthly average dust analyses.

- **Alloy Handling:** Potential emissions for alloy handling include particulate matter. Emissions were calculated based on AP-42 factors for Metallic Minerals Processing.

- **Emergency Generator Engines:** Potential emissions of criteria pollutants and HAPs are based on AP-42 emission factors for stationary internal combustion engines. Annual operation is assumed to be 500 hours per year for each engine.

- **Insignificant Sources:** Potential emissions from internal combustion engines are insignificant due to the limited operation of these sources. Similarly, emissions from several small storage tanks are insignificant due to their small size, low vapor pressure, and low volume of throughput. Additional information on insignificant activities are included in Attachment J.

5. APPLICATION SHIELD

5.1 Renewal Application Shield

Permit Condition No. 2.3.3 (from 45 CSR 30) states that a source shall lose its right to operate upon expiration of the current permit unless a timely and complete renewal application has been submitted to WVDEP. Since this Title V renewal application is being submitted at least six (6) months prior to the expiration of the current permit, the facility shall be protected from ceasing operation if the current Title V permit expires before WVDEP issues a renewal permit.

Additionally, Permit Condition No. 2.3.4 notes that if a timely and complete permit renewal application is submitted, but the Department fails to take final action to issue or deny the renewal permit before the end of the term of the previous permit, then the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue to be in effect.

5.2 Request for Permit Shield

Section 504(f) of the Clean Air Act Amendments (CAAA) defines the permit shield provision, whereby the permitting authority is empowered to provide that compliance with a Part 70 permit shall constitute compliance with all other applicable provisions of the Act. A provision may be included in the Title V Operating Permit stating that compliance with the conditions of the permit shall be deemed compliant with all applicable requirements (as of the date of permit issuance) provided that the following conditions are met:

- Such applicable requirements are identified and included in the permit; and
- WVDEP, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes such determinations or concise summaries thereof.

WVDEP has incorporated a permit shield provision in the current Title V permit (Condition No. 2.21). SWVA is requesting through this application that WVDEP continue to include the permit shield provisions in the renewed Title V permit consistent with this regulation. Therefore, in addition to providing a summary of applicable requirements, this application also provides non-applicability determinations for certain regulations to assist WVDEP in determining that identified regulations are not applicable to facility operations. Note that this non-applicability review is limited to those regulations for which there may be some question of applicability specific to the Huntington Facility.

6. TITLE V GENERAL FORMS

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475
www.dep.wv.gov/daq

Received
June 5, 2020
WV DEP/Div of Air Quality

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. **Name of Applicant (As registered with the WV Secretary of State's Office):**
Steel of West Virginia, Inc., A wholly owned subsidiary of Steel Dynamics, Inc.

2. **Facility Name or Location:**
2nd Ave &17th Street, Huntington, WV 25726

3. **DAQ Plant ID No.:**
011 -- 00009

4. **Federal Employer ID No. (FEIN):**
550621605

5. **Permit Application Type:**

☐ Initial Permit — When did operations commence?
☑ Permit Renewal — What is the expiration date of the existing permit? December 8, 2020
☐ Update to Initial/Renewal Permit Application

6. **Type of Business Entity:**

☑ Corporation ☐ Governmental Agency ☐ LLC
☐ Partnership ☐ Limited Partnership

7. **Is the Applicant the:**

☐ Owner ☐ Operator ☑ Both

If the Applicant is not both the owner and operator, please provide the name and address of the other party.

8. **Number of onsite employees:** ~250

9. **Governmental Code:**

☑ Privately owned and operated; 0
☐ Federally owned and operated; 1
☐ State government owned and operated; 2
☐ County government owned and operated; 3
☐ Municipality government owned and operated; 4
☐ District government owned and operated; 5

10. **Business Confidentiality Claims**

Does this application include confidential information (per 45CSR31)? ☐ Yes ☑ No

If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's *"PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY"* guidance.

11. Mailing Address		
Street or P.O. Box: P.O. Box 2547		
City: Huntington	**State:** WV	**Zip:** 25726 - 2547
Telephone Number: (304) 696 - 8200	**Fax Number:** (304) 529 - 1479	

12. Facility Location		
Street: 2nd Ave. & 17th St.	**City:** Huntington	**County:** Cabell
UTM Easting: 375.03 km	**UTM Northing:** 4,253.77 km	**Zone:** ☑ 17 or ☐ 18
Directions: From Charleston, WV, travel west on I-64 to Exit 15. Turn right onto West US-60 and continue for 5.3 miles. US-60 becomes 3rd Avenue in Huntington. Turn right onto 17th Street. SWVA office building is 153 yards on the left.		
Portable Source? ☐ Yes ☑ No		
Is facility located within a nonattainment area? ☐ Yes ☑ No		**If yes, for what air pollutants?**
Is facility located within 50 miles of another state? ☑ Yes ☐ No		**If yes, name the affected state(s).** Ohio Kentucky
Is facility located within 100 km of a Class I Area[1]? ☐ Yes ☑ No **If no, do emissions impact a Class I Area[1]?** ☐ Yes ☑ No		**If yes, name the area(s).**

[1] *Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.*

13. Contact Information		
Responsible Official: John P O'Connor		**Title:** Vice President - Administration
Street or P.O. Box: P.O. Box 2547		
City: Hungtington	**State:** WV	**Zip:** 25726 - 2547
Telephone Number: (304) 696 - 8200	**Fax Number:** ( ) -	
E-mail address: joconnor@swvainc.com		
Environmental Contact: Tyler Perry		**Title:** Manager - Environmental, Health & Safety
Street or P.O. Box: P.O. Box 2547		
City: Huntington	**State:** WV	**Zip:** 25726 - 2547
Telephone Number: (304) 962 - 6076	**Fax Number:** ( ) -	
E-mail address: tperry@swvainc.com		
Application Preparer: Christi Wilson		**Title:** Principal Consultant
Company: Trinity Consultants		
Street or P.O. Box: 4500 Brooktree Road, Suite 310		
City: Wexford	**State:** PA	**Zip:** 15090 -
Telephone Number: (724) 935 - 2611	**Fax Number:** ( ) -	
E-mail address: cwilson@trinityconsultants.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Melting scrap steel	Molten steel	331110	3312
Casting billets	Steel billets	331110	3312
Hot rolling purchased steel	Structural beams, channels, and sections	331221	3312

Provide a general description of operations.

Scrap steel, alloys, and fluxes are melted in an electric arc furnace. Molten steel from the electric arc furnace is transferred by ladle to the continuous caster. The drawn steel from the continuous caster is made into billets. Billets may be sold. Billets may be bought. Billets are reheated and rolled. The cold steel may be fabricated into cut-to-length sections, clipped, punched, welded, or given tabbed ends. Rust inhibitive coatings may be applied to the cold steel products.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A.**

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B.**

    For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C.** Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
☑ SIP	☐ FIP
☑ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☑ NESHAP (45CSR34)	☐ Nonattainment NSR (45CSR19)
☑ Section 111 NSPS	☑ Section 112(d) MACT standards
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☑ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☑ Compliance Assurance Monitoring (40CFR64)
☐ CAIR NO_x Annual Trading Program (45CSR39)	☐ CAIR NO_x Ozone Season Trading Program (45CSR40)
☐ CAIR SO_2 Trading Program (45CSR41)	

19. Non Applicability Determinations
List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.
N/A
☐ Permit Shield

19. Non Applicability Determinations *(Continued)* - *Attach additional pages as necessary.*

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

☐ Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*).

Open Burning – 45 CSR §6-3.1; Permit R30-01100009-2015, Condition 3.1.1 and 3.1.2
Asbestos – 40 CFR Part 61 and 45 CSR 34; Permit R30-01100009-2015, Condition 3.1.3
Odor – 45 CSR 4-3.1; Permit R30-01100009-2015, Condition 3.1.4
Standby Plan for Reducing Emissions – 45 CSR 11-5.2; Permit R30-01100009-2015, Condition 3.1.5
Emissions Inventory – 45 CSR 22-5-4(a)(14); Permit R30-01100009-2015, Condition 3.1.6
Ozone-Depleting Substances – 40 CFR Part 82, Subpart F; Permit R30-01100009-2015, Condition 3.1.7
Risk Management Plan – 40 CFR Part 68; Permit R30-01100009-2015, Condition 3.1.8
Minimize Emissions of Fugitive PM - 45 CSR 7-5.1; Permit R30-01100009-2015, Condition 3.1.9
Particulate Matter Control – 45 CSR 7-5.2; Permit R30-01100009-2015, Condition 3.1.10
Emissions Statement – 45 CSR 29-4.1; Permit R30-01100009-2015, Condition 3.1.11

☑ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:
Visible Emission Checks - 45 CSR 5.1.c.; Permit R30-01100009-2015, Condition 3.2.1.

Testing:
Stack Testing - WV Code 22-5-4(a)(14-15) and 45 CSR 13; Permit R30-01100009-2015, Condition 3.2.2.

Recordkeeping:
Monitoring Records - 45 CSR 30-5.1.c.2.A.; Permit R30-01100009-2015, Condition 3.4.1.
Retention of Records - 45 CSR 30-5.1.c.2.B; Permit R30-01100009-2015, Condition 3.4.2.
Odor Complaint Records - 45 CSR 30-5.1.c.; Permit R30-01100009-2015, Condition 3.4.3.

Reporting:
Responsible Official - 45 CSR 30-4.4 and 5.1.c.3.D; Permit R30-01100009-2015, Condition 3.5.1.
Confidentiality - 45 CSR 30-5.1.c.3.E.; Permit R30-01100009-2015, Condition 3.5.2.
Report Submittal Requirements - 45 CSR 30-8; Permit R30-01100009-2015, Condition 3.5.3.
Certified Emissions Statement - 45 CSR 30-8; Permit R30-01100009-2015, Condition 3.5.4.
Compliance Certification - 45 CSR 30-5.3.e.; Permit R30-01100009-2015, Condition 3.5.5.
Semi-annual Monitoring Reports - 45 CSR 30-5.1.c.3.A.; Permit R30-01100009-2015, Condition 3.5.6.
Deviations - 45 CSR 30-5.1.c.3.C.; Permit R30-01100009-2015, Condition 3.5.8.
New Applicable Requirements - 45 CSR 30-4.3.h.1.B.; Permit R30-01100009-2015, Condition 3.5.9.
Emission Statement Requirements - 45 CSR 29-5; Permit R30-01100009-2015, Condition 3.5.10.

Are you in compliance with all facility-wide applicable requirements? ☑ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F.**

20. Facility-Wide Applicable Requirements ***(Continued)*** *- Attach additional pages as necessary.*

List all facility-wide applicable requirements. For each applicable requirement, include the rule citation and/or permit with the condition number.

See pg 7 of 16

☐ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing/recordkeeping/ reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See pg 7 of 16

Are you in compliance with all facility-wide applicable requirements? ☐ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F.**

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit *(if any)*
R13-0834	04/01/1986	N/A

22. Inactive Permits/Obsolete Permit Conditions		
Permit Number	Date of Issuance	Permit Condition Number
R13-1100	02/01/1996	Discontinued Paint Dip System
R13-2618	10/03/2005	Void permit due to decision not to install

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	335.11
Nitrogen Oxides (NO_X)	247.12
Lead (Pb)	0.51
Particulate Matter ($PM_{2.5}$)[1]	57.74 (Filterable)
Particulate Matter (PM_{10})[1]	67.96 (Filterable)
Total Particulate Matter (TSP)	104.59 (Filterable)
Sulfur Dioxide (SO_2)	35.78
Volatile Organic Compounds (VOC)	31.26
Hazardous Air Pollutants[2]	Potential Emissions
Manganese	2.40
n-Hexane	2.07
Formaldehyde	0.11
Chromium	0.08
Cadmium	0.04
Regulated Pollutants other than Criteria and HAP	Potential Emissions

[1]$PM_{2.5}$ and PM_{10} are components of TSP.
[2]For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)		
☑	1.	Air compressors and pneumatically operated equipment, including hand tools.
☐	2.	Air contaminant detectors or recorders, combustion controllers or shutoffs.
☑	3.	Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
☑	4.	Bathroom/toilet vent emissions.
☑	5.	Batteries and battery charging stations, except at battery manufacturing plants.
☑	6.	Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
☐	7.	Blacksmith forges.
☐	8.	Boiler water treatment operations, not including cooling towers.
☑	9.	Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
☐	10.	CO_2 lasers, used only on metals and other materials which do not emit HAP in the process.
☑	11.	Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
☑	12.	Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
☑	13.	Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
☐	14.	Demineralized water tanks and demineralizer vents.
☑	15.	Drop hammers or hydraulic presses for forging or metalworking.
☐	16.	Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
☐	17.	Emergency (backup) electrical generators at residential locations.
☐	18.	Emergency road flares.
☐	19.	Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO_2, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:

24. Insignificant Activities (Check all that apply)		
☐	20.	Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27. Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:
☐	21.	Environmental chambers not using hazardous air pollutant (HAP) gases.
☑	22.	Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
☐	23.	Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
☑	24.	Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
☑	25.	Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
☑	26.	Fire suppression systems.
☑	27.	Firefighting equipment and the equipment used to train firefighters.
☐	28.	Flares used solely to indicate danger to the public.
☐	29.	Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
☐	30.	Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
☐	31.	Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
☐	32.	Humidity chambers.
☑	33.	Hydraulic and hydrostatic testing equipment.
☑	34.	Indoor or outdoor kerosene heaters.
☑	35.	Internal combustion engines used for landscaping purposes.
☐	36.	Laser trimmers using dust collection to prevent fugitive emissions.
☐	37.	Laundry activities, except for dry-cleaning and steam boilers.
☑	38.	Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
☐	39.	Oxygen scavenging (de-aeration) of water.
☐	40.	Ozone generators.

24. Insignificant Activities (Check all that apply)		
☑	41.	Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
☐	42.	Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
☑	43.	Process water filtration systems and demineralizers.
☑	44.	Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
☑	45.	Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
☑	46.	Routing calibration and maintenance of laboratory equipment or other analytical instruments.
☐	47.	Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
☐	48.	Shock chambers.
☐	49.	Solar simulators.
☑	50.	Space heaters operating by direct heat transfer.
☑	51.	Steam cleaning operations.
☐	52.	Steam leaks.
☐	53.	Steam sterilizers.
☐	54.	Steam vents and safety relief valves.
☐	55.	Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
☐	56.	Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
☐	57.	Such other sources or activities as the Director may determine.
☑	58.	Tobacco smoking rooms and areas.
☐	59.	Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the **Title V Equipment Table** and provide it as **ATTACHMENT D**.
26. Emission Units
For each emission unit listed in the **Title V Equipment Table**, fill out and provide an **Emission Unit Form** as **ATTACHMENT E**.
For each emission unit not in compliance with an applicable requirement, fill out a **Schedule of Compliance Form** as **ATTACHMENT F**.
27. Control Devices
For each control device listed in the **Title V Equipment Table**, fill out and provide an **Air Pollution Control Device Form** as **ATTACHMENT G**.
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the **Compliance Assurance Monitoring (CAM) Form(s)** for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as **ATTACHMENT H**.

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

*Note: This Certification must be signed by a responsible official. The **original**, signed in **blue ink**, must be submitted with the application. Applications without an **original** signed certification will be considered as incomplete.*

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name: John P. O'Connor	Title: Vice President of Administration

Responsible official's signature:

Signature: _____ Signature Date: 6/4/2020

(Must be signed and dated in blue ink)

Note: Please check all applicable attachments included with this permit application:	
☑	ATTACHMENT A: Area Map
☑	ATTACHMENT B: Plot Plan(s)
☑	ATTACHMENT C: Process Flow Diagram(s)
☑	ATTACHMENT D: Equipment Table
☑	ATTACHMENT E: Emission Unit Form(s)
☐	ATTACHMENT F: Schedule of Compliance Form(s)
☑	ATTACHMENT G: Air Pollution Control Device Form(s)
☐	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

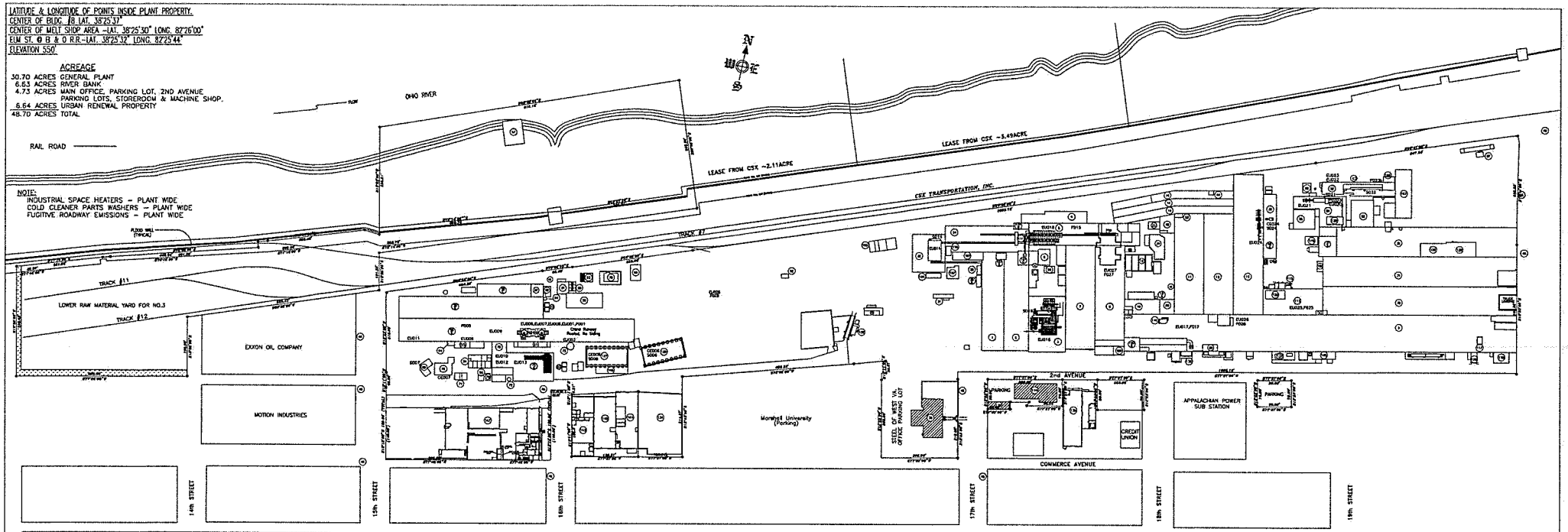
ATTACHMENT A – AREA MAP

Area Map of Steel of West Virginia, Inc.

ATTACHMENT B – PLOT PLAN

LATITUDE & LONGITUDE OF POINTS INSIDE PLANT PROPERTY.
CENTER OF BLDG. 18 LAT. 38°25'37"
CENTER OF MELT SHOP AREA -LAT. 38°25'30" LONG. 82°26'00"
E&W ST. @ B & O R.R.-LAT. 38°25'32" LONG. 82°25'44"
ELEVATION 550'

ACREAGE
30.70 ACRES GENERAL PLANT
6.63 ACRES RIVER BANK
4.73 ACRES MAIN OFFICE, PARKING LOT, 2ND AVENUE PARKING LOTS, STOREROOM & MACHINE SHOP.
6.64 ACRES URBAN RENEWAL PROPERTY
48.70 ACRES TOTAL



INDEX TO BUILDINGS

No.	Name Of Building
1	Lower Breaker Building
2	Middle Breaker Building
3	No. 2 Mill Furnace Building - R.W. #97010
4	No. 1 Mill Roll Shop
5	No. 1 Mill
6	No. 1 Mill
7	Lower Finishing Department
8	Upper Finishing Department
9	No. 2 Mill and Finishing
10	No. 2 Mill Roll Shop
11	Storage & Fabrication
12	Storage & Fabrication
13	Storage, Fabrication, Saws, & Shotblasting
14	Fabricating Department & Maintenance Welding
16	Water Basin #2 Mill
21	Fairbanks R.R. Track Scales
22	No. 1 Mill Furnace Building
23	Alloy Bins
24	No. 1 Mill Building
25	No. 1 Mill Office
26	Tool & Die Shop
28/28A	Gas Metering/Supply Bldgs
30	Storage - R.W. #97015
31	Weaving, Sewing, & Storage
31A	Sole Line Loam-To - Water #217
32	Storage - R.W. #96101
33	Break Room
34	Transformers
38	Main Office Building
39	Storage
40	Storage
44	Formen's Office
45	Transformers
48	Fire Hydrants
50	Transformer Building
52	Shifter Crew Shed
53	Break Room
54	Laboratory, Spectrograph, Physical Testing, Office
55	Locker Room
56A	Melt Shop Bldg
56B	Billet Storage
56C	Storage
59	Melt Shop Brick Storage
60	Oxygen Liquid Station (Air Products)
61	Transformer Room
63	Cooling Tower
64	Storage
67	Melt Shop Bath House
69	Pad for Fans, Motor Base, Stack & Inlet Boxes
70	Bag House (Wheelabrator)
71	Closed Circuit Cooler
72	Emergency Mold Water Tank
73	Lime Silo
75	Continuous Casting Building
75A	Billet Run-Out Building
78	Caster Foreman Office
79	Scale Pit - Cooling Pond
82	Torrid Wax Line
83	Kentucky Steel Truss Nos. Dp - #6193
84	Tab & Punch, Flaw Caster - R.W. #97045-13005
85	Wax Line Transformer Building
87	Scale House
89	Compressor Room
90	Cooling Tower & Pump Room
91	Compressor Room
92	Sub-Station 1000 Kva
93	Nitrogen Tank
94	Argon Tank
95	No. 2 Mill Furnace Reservoir & Cooling Tower
97	Barge Loading/Unloading Dock
99	No. 2 Mill Cooling Bed Motor Room
100	No. 2 Mill Rougher Motor Room (R1 thru R4)
100B	No. 2 Mill Finishing Motor Room (F1 thru F7)
101	No. 1 Mill Motor Room (801 & 802)
101A	No. 1 Mill Motor Room (803)
101B	No. 1 Mill Motor Room (1F)
101C	No. 1 Mill Hydraulic, Electric, & Motor Room (1R)
102	Sub Station
103	Water Basin
104	No. 1 Mill Furnace Cooling Tower
107	Sub Station
110	No. 1 Mill Pulpit
111	No. 1 Mill Pulpit
113	Dip-Weld Coil Storage - R.W. #78587
114	Bath House/Locker Room
115	Finishing Office
116	No. 2 Mill Pulpit
117	No. 2 Mill Finish Pulpit
118	Flying Shear Motor Room & Sub Station
119	Break Room/Bathroom
122	Argon Tank
123	Foremsh Office
127	Ferro-Alloy Baghouse - West Fabric Filter
128	Ferro-Alloys Baghouse - East Fabric Filter
129	Flying Shear Scrap Truck Shed
130	Leased Machine Shop (Owned by Engines Inc.)
132	Scrap Scales
134	Warehouse
135	Lower Cage Mechanical Bldg (air compressor, air receiver, dryer, & chiller)
137	Cooling bed spray system pump house
138	Uniform locker room building
141	Storeroom
142	Warehouse
143	Warehouse
144	Locomotive engine repair shop
145	#2 Mill Straightener Motor Room
146	Baghouse Loam-To
147	Storage Warehouse (Dolin Supply)
149	#1 Scale Beam
163	Air/Cooling Bed Air-Compressor Room
166	Pooled Beam Storage Loam-To
167	Rip-Lee Load/Unload

REVISION				REVISION				REVISION				REVISION				REVISION				REVISION			
No.	DESCRIPTION	BY	DATE	No.	DESCRIPTION	BY	DATE	No.	DESCRIPTION	BY	DATE	No.	DESCRIPTION	BY	DATE	No.	DESCRIPTION	BY	DATE	No.	DESCRIPTION	BY	DATE

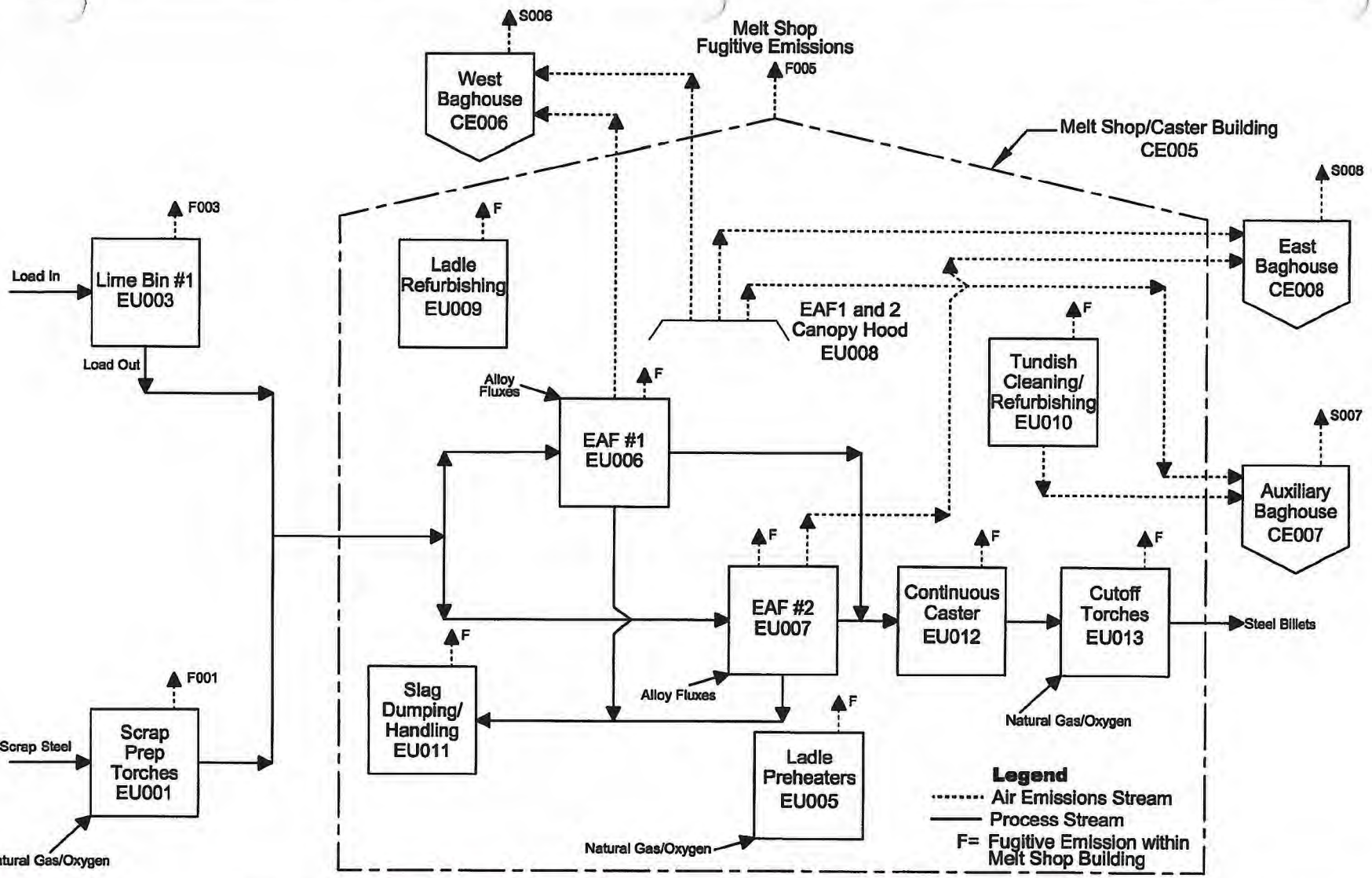
STEEL OF WEST VIRGINIA
HUNTINGTON, W.VA.

DRAWN RCH
CHECKED ---
SCALE 1" = 80'-0"

DEPT. GEN. PLANT
EQUIP. ENVIRONMENTAL
DEPT. PLANT LAYOUT W/ EMISSION POINTS

EQUIPMENT NO. 5821-00
DATE 5/22/20
DRAWING NO. J-93

ATTACHMENT C – PROCESS FLOW DIAGRAMS



No.	Revisions	By	Date
3	GEN. REV.	REH	3/23/20
2	REV. PER PENDING CHANGES	REH	7/24/09

STEEL OF WEST VIRGINIA
HUNTINGTON, WEST VIRGINIA

DEPT. MELT SHOP

EQUIP. PROCESS FLOW DIAGRAM

DETAIL EXISTING

SCALE NTS	EQUIPMENT No.
DATE 4/2/01	3A-246
DRAWN BY CAJ	
APPROVED BY	

ATTACHMENT D – TITLE V EQUIPMENT TABLE

ATTACHMENT D - Title V Equipment Table

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Point ID[1]	Control Device[1]	Emission Unit ID[1]	Emission Unit Description	Design Capacity	Year Installed/ Modified
F001	---	EU001	Scrap Preparation Torches (Insignificant Emission Unit [IEU])	0.5 MMBtu/hr	1952
S008, F003	CE006, CE007, CE008	EU003	Lime Bin #1 Load-in; H. K. Porter	1.66 tons/hr	1970
~~S007, F004~~	~~CE007~~	~~EU004~~	~~Lime Bin #2 Load-in; H. K. Porter~~	~~0.83 tons/hr~~	~~1970~~
F005A	CE005	EU005A	Ladle Preheaters; Eclipse	5.5 MMBtu/hr each	2013
S008, F005	CE008	EU006	Electric Arc Furnace #1; Lectramelt	20 tons/hr	1979
S007, F005	CE006	EU007	Electric Arc Furnace #2; Lectramelt	20 tons/hr	1979
S008, S006	CE006, CE008, CE007	EU008	EAF Canopy Hood	40 tons/hr	1989
F005	CE005	EU009	Ladle Refurbishing (IEU)	0.105 tons/hr	1950
S007, F005	CE007	EU010	Tundish Cleaning/Refurbishing (IEU)	0.02 tons/hr	1975
F005	CE005	EU011	Slag Handling	40 tons/hr	1950
F005	CE005	EU012	Continuous Caster; Concast	40 tons/hr	1975
F005	CE005	EU013	Caster Cutoff Torches	40 tons/hr	1975
S014	---	EU014	Reheat Furnace #1; Brickmont	96 MMBtu/hr	1984
F015	CE015	EU015	Hot Rolling Mill #1	40 tons/hr	1985
S016	---	EU016	Reheat Furnace #2; Brickmont	130 MMBtu/hr	1997
F017	CE017	EU017	Hot Rolling Mill #2	32 tons/hr	1994
F020	---	EU020	Paint Application	20 gal/hr	1997
S021	---	EU021	Paint Drying Oven (IEU)	4 MMBtu/hr	1997
S022	---	EU022	Continuous Wax Line Heater	4 MMBtu/hr	1997
F023a, b	---	EU023	Wax Application	33 gal/hr	1997
S024	CE024	EU024	Shot Blaster	2.4 tons/hr	1986
F025	---	EU025	Welding	10 tons/hr	1986
F026	---	EU026	Cold Cleaner	0.3 gal/hr	1975
F027	---	EU027	Scrap Cutup Torches (IEU)	2.6 MMBtu/hr	1952
F028	---	EU028	Plant Roads	3.2 miles	1952
F029	---	EU029	Baghouse Dust Handling	NA	1989
F030	---	EU030	Alloy Handling	NA	1979
S031	---	EU031	East Cooling Towers	1,800 gpm	2000

ATTACHMENT D - Title V Equipment Table

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Point ID[1]	Control Device[1]	Emission Unit ID[1]	Emission Unit Description	Design Capacity	Year Installed/ Modified
S032	---	EU032	Melt Shop Cooling Towers	5,273 gpm	1999
S033	---	EU033	Space Heaters (Natural Gas Fired)	5 MMBtu/hr	1982
S034	---	EU034	Emergency Generator #1 (Diesel Fired)	97 HP	1996
S035	---	EU035	Emergency Generator #2 (Natural Gas Fired)	254.3 HP	2010
S036	---	EU036	Emergency Generator #3 (Natural Gas Fired)	268 HP	2013

[1]For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT E – EMISSION UNIT FORMS

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU001	Scrap Preparation Torches	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive emissions associated with cutting torches, used to size scrap metal prior to furnace charging. Natural gas flame torches are used on an in-frequent basis (scrap dealers bring scrap into the plant in manageable sizes) at two locations near the Melt Shop.

Natural gas is used to keep the torch lit and to heat the metal. Once the metal is hot, predominantly oxygen is used during cutting.

Manufacturer:	**Model number:**	**Serial number:**
SWVA	Various	

Construction date:	**Installation date:**	**Modification date(s):**
06/01/1952	06/01/1952	06/01/1952

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
0.5 MMBtu/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.5 Mscf/hr	4.592 MMscf/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_ Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 0.5 MMBtu/hr	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Primary fuel type is natural gas.
Maximum hourly fuel usage: 0.5 Mscf/hr
Maximum annual fuel usage: 4.294 MMscf/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	15 ppmv	Unknown	1020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.04	0.18
Nitrogen Oxides (NO_X)	0.05	0.21
Lead (Pb)	2.5E-07	1.1E-06
Particulate Matter ($PM_{2.5}$)	0.14	0.63
Particulate Matter (PM_{10})	0.14	0.63
Total Particulate Matter (TSP)	0.14	0.63
Sulfur Dioxide (SO_2)	2.94E-04	1.29E-03
Volatile Organic Compounds (VOC)	2.70E-03	0.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
2-Methylnaphthalene	1.2E-08	5.2E-08
3-Methychloranthrene	8.8E-10	3.9E-09
7,12-Dimethylbenz(a)anthracene	7.8E-09	3.4E-08
Acenaphthene	8.8E-10	3.9E-09
Acenaphthylene	8.8E-10	3.9E-09
Anthracene	1.2E-09	5.2E-09
Benz(a)anthracene	8.8E-10	3.9E-09
Benzene	1.0E-06	4.5E-06
Benzo(a)pyrene	5.9E-10	2.6E-09
Benzo(b)fluoranthene	8.8E-10	3.9E-09
Benzo(g,h,i)perylene	5.9E-10	2.6E-09
Benzo(k)fluoranthene	8.8E-10	3.9E-09
Chrysene	8.8E-10	3.9E-09
Dibenzo(a,h) anthracene	5.9E-10	2.6E-09
Dichlorobenzene	5.9E-07	2.6E-06
Fluoranthene	1.5E-09	6.4E-09
Fluorene	1.4E-09	6.0E-09
Formaldehyde	3.7E-05	1.6E-04
Hexane	8.8E-04	3.9E-03
Indo(1,2,3-cd)pyrene	8.8E-10	3.9E-09
Naphthalene	3.0E-07	1.3E-06

Phenanthrene	8.3E-09	3.7E-08
Pyrene	2.5E-09	1.1E-08
Toluene	1.7E-06	7.3E-06
Arsenic	9.8E-08	4.3E-07
Beryllium	5.9E-09	2.6E-08
Cadmium	5.4E-07	2.4E-06
Chromium	6.9E-07	3.0E-06
Cobalt	4.1E-08	1.8E-07
Manganese	1.9E-07	8.2E-07
Mercury	1.3E-07	5.6E-07
Nickel	1.0E-06	4.5E-06
Selenium	1.2E-08	5.2E-08

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
None		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Table 12.5.1-1 (04/09), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4 (07/98).

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included. NA
__X__ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) NA
Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___ No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU003	Lime Bin #1	CE006 East Baghouse CE007 Auxiliary Baghouse CE008 West Baghouse

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Storage silo for lime used in the EAFs. Emissions during filling are exhausted to a bin vent filter. Fugitive emissions during unloading may be generated and are collected by the melt shop canopy hood, which is controlled by CE006, CE007, and CE008.
1.66 tons per hour may be moved in or out of the silo.

Manufacturer:	**Model number:**	**Serial number:**
Imperial Industries		
Construction date:	**Installation date:**	**Modification date(s):**
	10/16/2019	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1.66 tons/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1.66 tons/hr	14,584 tons/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes _X_ No	**If yes, is it?** ___ Indirect Fired __Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	NA	NA	
Nitrogen Oxides (NO_X)	NA	NA	
Lead (Pb)	NA	NA	
Particulate Matter ($PM_{2.5}$)	0.20	0.87	
Particulate Matter (PM_{10})	0.18	0.81	
Total Particulate Matter (TSP)	0.17	0.76	
Sulfur Dioxide (SO_2)	NA	NA	
Volatile Organic Compounds (VOC)	NA	NA	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
NA			
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PM emission factors based on engineering estimates.
Fugitive PM emission factors based on AP-42, Section 13.2.4 (11/06).

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

20% Opacity Limit - [45CSR§7-3.1.]; Title V Permit Condition 4.1.1.

No Visible Emissions - [45CSR§7-3.2. *(EU003)*]; Title V Permit Condition 4.1.2.

_X___ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:
Visual emission checks for opacity limits - [45CSR§30-5.1.c.]; Title V Permit Condition 3.2.1

Testing:
NA

Recordkeeping:
Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.

Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Reporting:
Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.

Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.

Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.

Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU005A	Ladle preheaters	CE005 Melt Shop / Caster Building

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
There are four ladle preheater stations which use direct-fired natural gas flame to preheat ladle before molten steel is poured from the EAFs into the ladle. All four ladle preheaters were replaced in 2013. Each ladle preheater station is rated at 5.5 MMBtu/hr. Natural gas combustion produces fugitive emissions. The Melt Shop/Caster Building captures 100% and control 70% of the particulate emissions.

Manufacturer:	**Model number:**	**Serial number:**
Eclipse	TJ0500	
Construction date:	**Installation date:**	**Modification date(s):**
2013	2013	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
5.5 MMBtu/hr for each of the four stations

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
5.5 Mscf/hr (each)	48.18 Mscf/yr (each)	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_Yes __ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 5.5 MMBtu/hr for each of the four stations	**Type and Btu/hr rating of burners:** 5.5 MMBtu/hr (each)

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Primary fuel is natural gas.
Maximum hourly fuel usage: 5.4 Mscf/hr (each)
Maximum annual fuel usage: 47.24 Mscf/yr (each)

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	15 ppmv	Unknown	1020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	1.81	7.94
Nitrogen Oxides (NO_X)	2.16	9.45
Lead (Pb)	1.1E-05	4.72E-05
Particulate Matter ($PM_{2.5}$)	0.04	0.18
Particulate Matter (PM_{10})	0.04	0.18
Total Particulate Matter (TSP)	0.04	0.18
Sulfur Dioxide (SO_2)	0.01	0.06
Volatile Organic Compounds (VOC)	0.12	0.52
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
2-Methylnaphthalene	5.2E-07	2.27E-06
3-Methychloranthrene	3.9E-08	1.70E-07
7,12-Dimethylbenz(a)anthracene	3.5E-07	1.51E-06
Acenaphthene	3.9E-08	1.70E-07
Acenphthylene	3.9E-08	1.70E-07
Anthracene	5.2E-08	2.27E-07
Benz(a)anthracene	3.9E-08	1.70E-07
Benzene	4.5E-05	1.98E-04
Benzo(a)pyrene	2.6E-08	1.13E-07
Benzo(b)fluoranthene	3.9E-08	1.70E-07
Benzo(g,h,i)perylene	2.6E-08	1.13E-07
Benzo(k)fluoranthene	3.9E-08	1.70E-07
Chrysene	3.9E-08	1.70E-07
Dibenzo(a,h) anthracene	2.6E-08	1.13E-07
Dichlorobenzene	2.6E-05	1.13E-04
Fluoranthene	6.5E-08	2.83E-07
Fluorene	6.0E-08	2.65E-07
Formaldehyde	1.6E-03	7.09E-03
Hexane	3.9E-02	1.70E-01
Indo(1,2,3-cd)pyrene	3.9E-08	1.70E-07
Naphthalene	1.3E-05	5.76E-05
Phenanthrene	3.7E-07	1.61E-06

Pyrene	1.1E-07	4.72E-07
Toluene	7.3E-05	3.21E-04
Arsenic	4.3E-06	1.89E-05
Beryllium	2.6E-07	1.13E-06
Cadmium	2.4E-05	1.04E-04
Chromium	3.0E-05	1.32E-04
Cobalt	1.8E-06	7.94E-06
Manganese	8.2E-06	3.59E-05
Mercury	5.6E-06	2.46E-05
Nickel	4.5E-05	1.98E-04
Selenium	5.2E-07	2.27E-06

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Tables 1.4-1, 1.4-2, 1.4-3., and 1.4-4 (07/98).

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.
20% Opacity Limit - [45CSR§7-3.1.]; Title V Permit Condition 4.1.1.

Maximum Allowable PM Emission Limit (lb/hr): 29.4 - [45CSR§7-4.1.]; Title V Permit Condition 4.1.3.

No circumvention of exhaust - [45CSR§7-4.3.]; Title V Permit Condition 4.1.4.

Establish stack flow patterns consistent with acceptable stack sampling procedures - [45CSR§7-4.12.]; Title V Permit Condition 4.1.6.

Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.

Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)
Monitoring:
Visual emission checks for opacity limits - [45CSR§30-5.1.c.]; Title V Permit Condition 3.2.1

Testing:
Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.
Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.

Recordkeeping:
Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.
Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Reporting:
Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.
Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.
Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.
Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.
Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU006	Electric Arc Furnace #1	Primary – CE008 Secondary – CE005, CE006, CE007

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
EAF #1 produces molten steel by melting scrap steel, alloys and flux materials. Emissions are primarily controlled by a side-draft hood and baghouse (CE008). Any fugitive emissions are captured by the Melt Shop/Caster Building (CE005) and may be controlled by the Canopy Hood (EU008), which employs 3 baghouses (CE006, CE007 and CE008).
Potential emissions include both stack (S008 and S006) and fugitive (F005).

Manufacturer:	**Model number:**	**Serial number:**
Lectramelt	1952-80	

Construction date:	**Installation date:**	**Modification date(s):**
06/01/1952	06/01/1952	06/01/1952

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
20 tons/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
20 tons/hr	175,200 tons/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes _X_ No	**If yes, is it?** ___ Indirect Fired __Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

The furnace derives its heat from electricity (no fuel combustion).

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	36.00	157.68
Nitrogen Oxides (NO_X)	4.40	19.27
Lead (Pb)	2.57E-02	1.21E-01
Particulate Matter ($PM_{2.5}$)	2.06	9.02
Particulate Matter (PM_{10})	2.09	9.18
Total Particulate Matter (TSP)	2.51	10.99
Sulfur Dioxide (SO_2)	4.00	17.52
Volatile Organic Compounds (VOC)	0.46	2.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Arsenic	8.65E-06	3.79E-05
Beryllium	5.60E-06	2.45E-05
Cadmium	2.21E-03	9.70E-03
Chromium	4.12E-03	1.80E-02
Manganese	8.45E-02	3.70E-01
Mercury	3.46E-07	1.52E-06
Nickel	4.15E-04	1.82E-03
Zinc	5.64E-01	2.47
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
None		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).
Filterable PM emission factors based on stack testing.
PM_{10} is assumed to be 76% of total PM – AP-42 Table 12.5-2 (01/95)
$PM_{2.5}$ is assumed to be 74% of total PM – AP-42 Table 12.5-2 (01/95)
Condensable PM – AP-42 Section 12.5, Table 12.5.1-2 (04/09)
NO_X – AP-42 Section 12.5, Table 12.5.1-4 (04/09)
VOC – AP-42 Section 12.5, Table 12.5.1-8 (04/09)
SO_2 – AP-42 Section 12.5, Table 12.5.1-6 (04/09)
CO – AP-42 Section 12.5, Table 12.5.1-5 (04/09)
As, Ca, Cr, Pb, Mn, Hg, Ni, Zn from baghouse dust analysis.
Be, F – AP-42 Table 12.5.1-9 (04/09)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Maximum Allowable PM Emission (lb/hr): 28.0 - [45CSR§7-4.1.]; Title V Permit Condition 4.1.3.

No circumvention of exhaust - [45CSR§7-4.3.]; Title V Permit Condition 4.1.4.

Establish stack flow patterns consistent with acceptable stack sampling procedures - [45CSR§7-4.12.]; Title V Permit Condition 4.1.6.

Emissions of Hazardous Material - [45CSR§7-4.13. *(EU006 and EU007)*]; Title V Permit Condition 4.1.7.

Sulfur Dioxide Emission Limit 2,000 parts per million by volume - [45CSR§10-4.1. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.1.8.

Requirements for control of contaminated scrap - [40 CFR § 63.10685(a) and (b); and 45CSR34]; Title V Permit Condition 4.1.10

Control requirements for electric arc furnaces:
-PM emission limit 0.0052 gr/dscf
-6% opacity limit
[40 CFR § 63.10686(a) and (b); and 45CSR34 and 45CSR§7-3.1. *(EU006 and EU007)*]; Title V Permit Condition 4.1.11.

Weekly visible emission checks of baghouse emissions - [45CSR§30-5.1.c., 40 CFR §63.10686(e), and 40 CFR § 64.3(a)(1) and (2) *(CE006, CE007, and CE008)*]; Title V Permit Condition 4.2.1.

Testing and/or monitoring to demonstrate compliance with SO_2 emission limit - [45CSR§10-8.2.c. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.2.2.

Compliance with Section 4.1.7. of this permit by minimizing HAP emissions from the Electric Arc Furnaces by operating and maintaining equipment in accordance with good plant operating procedures. [45CSR§30-5.1.c. *(EU006 and EU007)*]; Title V Permit Condition 4.2.3.

Monitoring and Recordkeeping of capture system and PM control device – [40 CFR part 63, subpart YYYYY, 40 CFR part 64, 40 CFR § 63.10686(e) *(EU006 and EU007)*]; Title V Permit Condition 4.2.4.

Maintain baghouse fan amperage between 185 and 205 amps ±15% for CE006 and CE008; and 60 to 65 amps ± 15% for CE007 - [45CSR§30-5.1.c., 40 CFR §63.10686(e), 40 CFR § 64.3(a)(1) and (2) *(CE006, CEU007, and CE008)*]; Title V Permit Condition 4.2.5.

Emissions test data to be collected during continuous operation - [45CSR§30-5.1.c., 40 CFR § 64.7(c) *(CE006, CEU007, and CE008)*]; Title V Permit Condition 4.2.6.

Response to excursions or exceedance - [45CSR§30-5.1.c., 40 CFR § 64.7(d) (CE006, CEU007, and CE008)]; Title V Permit Condition 4.2.7.

Documentation of need for improved monitoring - [45CSR§30-5.1.c., 40 CFR § 64.7(e) (CE006, CEU007, and CE008)]; Title V Permit Condition 4.2.8.

Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.

Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.
Initial compliance demonstration - [40 CFR § 63.10686(b) and 45CSR34 *(EU006 and EU007)*]; Title V Permit

Condition 4.3.3.

Recordkeeping of required monitoring data for a minimum of 5 years - [45CSR§10-8.3.a. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.4.1.

Daily recordkeeping of the time and duration of each charge; and the time and duration of each tap - [45CSR§30-5.1.c.]; Title V Permit Condition 4.4.3.

Recordkeeping and Reporting Requirements - [40 CFR § 63.10685(c)(1) and (2) and 45CSR34]; Title V Permit Condition 4.4.4.

Submission of exception report - [45CSR§10-8.3.b. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.5.1.

Semiannual compliance reports to the Administrator for the control of contaminants from scrap - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:
Weekly visible emission checks of baghouse emissions - [45CSR§30-5.1.c., 40 CFR §63.10686(e), and 40 CFR § 64.3(a)(1) and (2) *(CE006, CE007, and CE008)*]; Title V Permit Condition 4.2.1.

Testing and/or monitoring to demonstrate compliance with SO_2 emission limit - [45CSR§10-8.2.c. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.2.2.

Monitoring and Recordkeeping of capture system and PM control device – [40 CFR part 63, subpart YYYYY, 40 CFR part 64, 40 CFR § 63.10686(e) *(EU006 and EU007)*]; Title V Permit Condition 4.2.4.

Testing:
Testing and/or monitoring to demonstrate compliance with SO_2 emission limit - [45CSR§10-8.2.c. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.2.2.

Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.

Stack testing - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.

Initial compliance demonstration - [40 CFR § 63.10686(b) and 45CSR34 *(EU006 and EU007)*]; Title V Permit Condition 4.3.3

Recordkeeping:
Monitoring and Recordkeeping of capture system and PM control device – [40 CFR part 63, subpart YYYYY, 40 CFR part 64, 40 CFR § 63.10686(e) *(EU006 and EU007)*]; Title V Permit Condition 4.2.4.

Recordkeeping of required monitoring data for a minimum of 5 years - [45CSR§10-8.3.a. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.4.1.

Daily recordkeeping of the time and duration of each charge; and the time and duration of each tap - [45CSR§30-5.1.c.]; Permit Condition 4.4.3

Recordkeeping and Reporting Requirements - [40 CFR § 63.10685(c)(1) and (2) and 45CSR34]; Permit Condition 4.4.4

Reporting:
Submission of exception report - [45CSR§10-8.3.b. *(EU006, EU007, EU014, EU016)*]; Permit Condition 4.5.1.

Semiannual compliance reports to the Administrator for the control of contaminants from scrap - [40 CFR § 63.10685(c)(3) and 45CSR34]; Permit Condition 4.5.2.

Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.

Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.

Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.

Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU007	Electric Arc Furnace #2	Primary – CE006 Secondary – CE005, CE007, CE008

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
EAF #2 produces molten steel by melting scrap steel, alloys and flux materials. Emissions are primarily controlled by a side-draft hood and baghouse (CE006). Any fugitive emissions are captured by the Melt Shop/Caster Building (CE005) and may be controlled by the Canopy Hood (EU008), which employs 3 baghouses (CE006, CE007 and CE008).
Potential emissions include both stack (S007, S006, S008) and fugitive (F005).

Manufacturer:	**Model number:**	**Serial number:**
Lectramelt	1964-80	
Construction date:	**Installation date:**	**Modification date(s):**
06/01/1964	06/01/1964	06/01/1979

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
20 tons/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
20 tons/hr	175,200 tons/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes _X_ No	**If yes, is it?** ___ Indirect Fired __Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

The furnace derives its heat from electricity (no fuel combustion).

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	36.00	157.68
Nitrogen Oxides (NO_X)	4.40	19.27
Lead (Pb)	2.75E-02	1.21E-01
Particulate Matter ($PM_{2.5}$)	2.06	9.02
Particulate Matter (PM_{10})	2.09	9.18
Total Particulate Matter (TSP)	2.51	10.99
Sulfur Dioxide (SO_2)	4.00	17.52
Volatile Organic Compounds (VOC)	0.46	2.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Arsenic	8.65E-06	3.79E-05
Beryllium	5.60E-06	2.45E-05
Cadmium	2.21E-03	9.70E-03
Chromium	4.12E-03	1.80E-02
Manganese	8.45E-02	3.70E-01
Mercury	3.46E-07	1.52E-06
Nickel	4.15E-04	1.82E-03
Zinc	5.64E-01	2.47E+00
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
None		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).
Filterable PM emission factors based on stack testing.
PM_{10} is assumed to be 76% of total PM – AP-42 Table 12.5-2 (01/95)
$PM_{2.5}$ is assumed to be 74% of total PM – AP-42 Table 12.5-2 (01/95)
Condensable PM – AP-42 Section 12.5, Table 12.5.1-2 (04/09)
NO_X – AP-42 Section 12.5, Table 12.5.1-4 (04/09)
VOC – AP-42 Section 12.5, Table 12.5.1-8 (04/09)
SO_2 – AP-42 Section 12.5, Table 12.5.1-6 (04/09)
CO – AP-42 Section 12.5, Table 12.5.1-5 (04/09)
As, Ca, Cr, Pb, Mn, Hg, Ni, Zn from baghouse dust analysis.
Be, F – AP-42 Table 12.5.1-9 (04/09)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Maximum Allowable PM Emission (lb/hr): 28.0 - [45CSR§7-4.1.]; Title V Permit Condition 4.1.3.

No circumvention of exhaust - [45CSR§7-4.3.]; Title V Permit Condition 4.1.4.

Establish stack flow patterns consistent with acceptable stack sampling procedures - [45CSR§7-4.12.]; Title V Permit Condition 4.1.6.

Emissions of Hazardous Material - [45CSR§7-4.13. *(EU006 and EU007)*]; Title V Permit Condition 4.1.7.

Sulfur Dioxide Emission Limit 2,000 parts per million by volume - [45CSR§10-4.1. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.1.8.

Requirements for control of contaminated scrap - [40 CFR § 63.10685(a) and (b); and 45CSR34]; Title V Permit Condition 4.1.10

Control requirements for electric arc furnaces:
-PM emission limit 0.0052 gr/dscf
-6% opacity limit
[40 CFR § 63.10686(a) and (b); and 45CSR34 and 45CSR§7-3.1. *(EU006 and EU007)*]; Title V Permit Condition 4.1.11.

Weekly visible emission checks of baghouse emissions - [45CSR§30-5.1.c., 40 CFR §63.10686(e), and 40 CFR § 64.3(a)(1) and (2) *(CE006, CE007, and CE008)*]; Title V Permit Condition 4.2.1.

Testing and/or monitoring to demonstrate compliance with SO_2 emission limit - [45CSR§10-8.2.c. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.2.2.

Compliance with Section 4.1.7. of this permit by minimizing HAP emissions from the Electric Arc Furnaces by operating and maintaining equipment in accordance with good plant operating procedures. [45CSR§30-5.1.c. *(EU006 and EU007)*]; Title V Permit Condition 4.2.3.

Monitoring and Recordkeeping of capture system and PM control device – [40 CFR part 63, subpart YYYYY, 40 CFR part 64, 40 CFR § 63.10686(e) *(EU006 and EU007)*]; Title V Permit Condition 4.2.4.

Maintain baghouse fan amperage between 185 and 205 amps ±15% for CE006 and CE008; and 60 to 65 amps ± 15% for CE007 - [45CSR§30-5.1.c., 40 CFR §63.10686(e), 40 CFR § 64.3(a)(1) and (2) *(CE006, CEU007, and CE008)*]; Title V Permit Condition 4.2.5.

Emissions test data to be collected during continuous operation - [45CSR§30-5.1.c., 40 CFR § 64.7(c) *(CE006, CEU007, and CE008)*]; Title V Permit Condition 4.2.6.

Response to excursions or exceedance - [45CSR§30-5.1.c., 40 CFR § 64.7(d) (CE006, CEU007, and CE008)]; Title V Permit Condition 4.2.7.

Documentation of need for improved monitoring - [45CSR§30-5.1.c., 40 CFR § 64.7(e) (CE006, CEU007, and CE008)]; Title V Permit Condition 4.2.8.

Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.

Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.

Initial compliance demonstration - [40 CFR § 63.10686(b) and 45CSR34 *(EU006 and EU007)*]; Title V Permit Condition 4.3.3.

Recordkeeping of required monitoring data for a minimum of 5 years - [45CSR§10-8.3.a. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.4.1.

Daily recordkeeping of the time and duration of each charge; and the time and duration of each tap - [45CSR§30-5.1.c.]; Title V Permit Condition 4.4.3.

Recordkeeping and Reporting Requirements - [40 CFR § 63.10685(c)(1) and (2) and 45CSR34]; Title V Permit Condition 4.4.4.

Submission of exception report - [45CSR§10-8.3.b. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.5.1.

Semiannual compliance reports to the Administrator for the control of contaminants from scrap - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

_X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:
Weekly visible emission checks of baghouse emissions - [45CSR§30-5.1.c., 40 CFR §63.10686(e), and 40 CFR § 64.3(a)(1) and (2) *(CE006, CE007, and CE008)*]; Title V Permit Condition 4.2.1.

Testing and/or monitoring to demonstrate compliance with SO_2 emission limit - [45CSR§10-8.2.c. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.2.2.

Monitoring and Recordkeeping of capture system and PM control device – [40 CFR part 63, subpart YYYYY, 40 CFR part 64, 40 CFR § 63.10686(e) *(EU006 and EU007)*]; Title V Permit Condition 4.2.4.

Testing:
Testing and/or monitoring to demonstrate compliance with SO_2 emission limit - [45CSR§10-8.2.c. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.2.2.

Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.

Stack testing - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.

Initial compliance demonstration - [40 CFR § 63.10686(b) and 45CSR34 *(EU006 and EU007)*]; Title V Permit Condition 4.3.3

Recordkeeping:
Monitoring and Recordkeeping of capture system and PM control device – [40 CFR part 63, subpart YYYYY, 40 CFR part 64, 40 CFR § 63.10686(e) *(EU006 and EU007)*]; Title V Permit Condition 4.2.4.

Recordkeeping of required monitoring data for a minimum of 5 years - [45CSR§10-8.3.a. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.4.1.

Daily recordkeeping of the time and duration of each charge; and the time and duration of each tap - [45CSR§30-5.1.c.]; Permit Condition 4.4.3

Recordkeeping and Reporting Requirements - [40 CFR § 63.10685(c)(1) and (2) and 45CSR34]; Permit Condition 4.4.4

Reporting:

Submission of exception report - [45CSR§10-8.3.b. *(EU006, EU007, EU014, EU016)*]; Permit Condition 4.5.1.

Semiannual compliance reports to the Administrator for the control of contaminants from scrap - [40 CFR § 63.10685(c)(3) and 45CSR34]; Permit Condition 4.5.2.

Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.

Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.

Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.

Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU008	Electric Arc Furnace Canopy Hood	CE008 West Baghouse CE006 East Baghouse CE007 Wheelabrator/Auxiliary Baghouse

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
The Canopy Hood is not a true emission unit. This Emission Unit Form and a Control Device Form were created to show the configuration and to describe the emission stream. The Canopy Hood collects fugitive emissions captured by the Melt Shop/Caster Building (CE005).

Emissions are stack (S007, S008 and S006).

The Melt Shop/Caster Building (CE005) captures 100% of the fugitive emissions generated by emission units EU005, EU006, EU007, EU009, EU010, EU011, EU012, and EU013. The Melt Shop/Caster Building controls 70% of the particulate emissions due to settling effects.

Manufacturer:	**Model number:**	**Serial number:**

Construction date:	**Installation date:**	**Modification date(s):**
06/01/1989	06/01/1989	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
40 tons/hr of EAF throughput

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
40 tons/hr	350,400 tons/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes _X_ No	**If yes, is it?** ___ Indirect Fired __Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

NA			

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA (Already accounted for in EAF #1 & EAF #2 emissions)	
Nitrogen Oxides (NO_X)	NA (Already accounted for in EAF #1 & EAF #2 emissions)	
Lead (Pb)	1.66E-02	7.25E-02
Particulate Matter ($PM_{2.5}$)	2.60	11.39
Particulate Matter (PM_{10})	2.35	10.29
Total Particulate Matter (TSP)	3.33	10.20
Sulfur Dioxide (SO_2)	NA (Already accounted for in EAF #1 & EAF #2 emissions)	
Volatile Organic Compounds (VOC)	NA (Already accounted for in EAF #1 & EAF #2 emissions)	

Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Arsenic	5.20E-06	2.28E-05
Beryllium	NA (Already accounted for in EAF #1 & EAF #2 emissions)	
Cadmium	1.33E-03	5.83E-03
Chromium	2.48E-03	1.08E-02
Fluoride Compounds	NA (Already accounted for in EAF #1 & EAF #2 emissions)	
Manganese	5.08E-02	2.22E-01
Mercury	2.08E-07	9.11E-07
Nickel	2.50E-04	1.09E-03
Zinc	3.39E-01	1.49E+00

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
None		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).
Filterable PM based on stack testing.
PM_{10} is assumed to be 76% of total PM – AP-42 Table 12.5-2 (01/95)
$PM_{2.5}$ is assumed to be 74% of total PM – AP-42 Table 12.5-2 (01/95)
Condensable PM – AP-42 Section 12.5, Table 12.5.1-2 (04/09)
As, Ca, Cr, Pb, Mn, Hg, Ni, Zn from baghouse dust analysis.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Not applicable.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Not applicable.

Are you in compliance with all applicable requirements for this emission unit? __X__ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F.**

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU009	Ladle Refurbishing	CE005 Melt Shop/Caster Building

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive emissions associated with mechanically removing refractory material from the ladle shell and handling the refractory material for offsite shipment.

Manufacturer:	**Model number:**	**Serial number:**

Construction date:	**Installation date:**	**Modification date(s):**
06/01/1950	06/01/1950	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
None – This emission unit is a batch process performed on an as needed basis.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.105 tons of refractory	919.8 tons of refractory	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes _X_ No	**If yes, is it?** ___ Indirect Fired __Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	1.32E-04	5.76E-04
Particulate Matter (PM_{10})	1.99E-05	8.73E-05
Total Particulate Matter (TSP)	2.78E-04	1.22E-03
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	NA	NA
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Section 13.2.4

The Melt Shop/Caster Building captures and controls 70% of the particulate emissions.

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included. NA
_X__ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) NA
Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___ No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU010	Tundish Cleaning and Refurbishing	CE007 – Wheelabrator (Auxiliary) Baghouse

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive emissions associated with refurbishing the refractory material inside the tundish shell and handling the refractory material for offsite shipment.
Stack emissions from the baghouse associated with removing metal from the tundish.
Metal is removed from the tundish using a natural gas/oxygen torch.

Manufacturer:	**Model number:**	**Serial number:**

Construction date:	**Installation date:**	**Modification date(s):**
06/01/1975	06/01/1975	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
None – This emission unit is a batch process performed on an as-needed basis.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.02 tons of refractory	175.2 tons of refractory	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X__Yes ___ No	**If yes, is it?** ___ Indirect Fired __X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 0.5 MMBtu/hr	**Type and Btu/hr rating of burners:** Torches with burning tips

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Natural Gas
Hourly – 0.003 MMscf/hr
Annual – 26 MMscf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	15 ppmv	Unknown	1020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.25	1.08
Nitrogen Oxides (NO_X)	0.29	1.29
Lead (Pb)	1.5E-06	6.44E-06
Particulate Matter ($PM_{2.5}$)	0.02	0.10
Particulate Matter (PM_{10})	0.02	0.10
Total Particulate Matter (TSP)	0.03	0.11
Sulfur Dioxide (SO_2)	0.002	0.01
Volatile Organic Compounds (VOC)	0.02	0.07
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
2-Methylnaphthalene	7.1E-08	3.09E-07
3-Methylchloranthrene	5.3E-09	2.32E-08
7,12-Dimethylbenz(a)anthracene	4.7E-08	2.06E-07
Acenaphthene	5.3E-09	2.32E-08
Acenaphthylene	5.3E-09	2.32E-08
Anthracene	7.1E-09	3.09E-08
Benz(a)anthracene	5.3E-09	2.32E-08
Benzene	6.2E-06	2.71E-05
Benzo(a)pyrene	3.5E-09	1.55E-08
Benzo(b)fluoranthene	5.3E-09	2.32E-08
Benzo(g,h,i)perylene	3.5E-09	1.55E-08
Benzo(k)fluoranthene	5.3E-09	2.32E-08
Chrysene	5.3E-09	2.32E-08
Dibenzo(a,h) anthracene	3.5E-09	1.55E-08
Dichlorobenzene	3.5E-06	1.55E-05
Fluoranthene	8.8E-09	3.86E-08
Fluorene	8.2E-09	3.61E-08
Hexane	2.2E-04	9.66E-04
Indo(1,2,3-cd)pyrene	5.3E-03	2.32E-02
Napthalene	5.3E-09	2.32E-08
Phenanthrene	1.8E-06	7.86E-06
Pyrene	5.0E-08	2.19E-07

Toluene	1.0E-05	4.38E-05
Arsenic	5.9E-07	2.58E-06
Beryllium	3.5E-08	1.55E-07
Cadmium	3.2E-06	1.42E-05
Chromium	4.1E-06	1.80E-05
Cobalt	2.5E-07	1.08E-06
Manganese	1.1E-06	4.90E-06
Mercury	7.6E-07	3.35E-06
Nickel	6.2E-06	2.71E-05
Selenium	7.1E-08	3.09E-07
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Refurbishing
PM – AP-42, Section 13.2.4

Gas Combustion
Criteria pollutants – AP-42 Tables 1.4-1 and 1.4-2 (July 1998)

The Melt Shop/Caster Building captures and controls 70% of the particulate emissions.

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included. NA
__X__ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) NA
Are you in compliance with all applicable requirements for this emission unit? ___Yes ___No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F.**

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU011	Slag Handling	CE005 – Melt Shop/Caster Building

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive emissions associated with slag handling operations commencing after the slag has been poured from the ladles.

Manufacturer:	**Model number:**	**Serial number:**

Construction date:	**Installation date:**	**Modification date(s):**
06/07/1950	06/07/1950	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Process operations performed on an as-need basis.
Slag generated from a maximum of 40 tons/hr of steel from the EAFs.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
40 tons/hr	350,400 tons/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	0.18	0.81
Particulate Matter (PM_{10})	0.52	2.28
Total Particulate Matter (TSP)	1.04	4.56
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	NA	NA
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Section 12.5-4 (01/95)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

20% Opacity Limit - [45CSR§7-3.1.]; Title V Permit Condition 4.1.1.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:

Visual emission checks for opacity limits - [45CSR§30-5.1.c.]; Title V Permit Condition 3.2.1

Testing:

NA

Recordkeeping:

Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.

Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Reporting:

Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.

Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.

Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.

Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Are you in compliance with all applicable requirements for this emission unit? _X__Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F.**

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU012	Continuous Caster	CE005 – Melt Shop/Caster Building

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive emissions associated with producing steel billets from molten steel.
Emissions are generated from the exposed molten steel in the ladle and tundish.

Manufacturer:	**Model number:**	**Serial number:**
Concast		
Construction date:	**Installation date:**	**Modification date(s):**
06/01/1975	06/01/1975	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
40 tons/hr of molten steel from the EAFs.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
40 tons/hr	350,400 tons/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes _X_ No	**If yes, is it?** ___ Indirect Fired __Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	1.21	5.32
Particulate Matter (PM_{10})	1.24	5.45
Total Particulate Matter (TSP)	1.59	6.96
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	NA	NA
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Filterable TSP - AP-42, Table 12.5.1-8 (04/09)
Filterable $PM_{2.5}$ - 74% of total PM is $PM_{2.5}$ - AP-42 Table 12.5-2 (01/95)
Filterable PM_{10} - 76% of total PM is PM_{10} - AP-42 Table 12.5-2 (01/95)
Condensable PM - Ratio of baghouse PM_{CON} to PM_{FIL}

The Melt Shop/Caster Building captures and controls 70% of the particulate emissions.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

20% Opacity Limit - [45CSR§7-3.1.]; Title V Permit Condition 4.1.1.

Maximum Allowable PM Emission Limit (lb/hr): 32.2 - [45CSR§7-4.1.]; Permit Condition 4.1.3.

No circumvention of exhaust - [45CSR§7-4.3.]; Title V Permit Condition 4.1.4.

Establish stack flow patterns consistent with acceptable stack sampling procedures - [45CSR§7-4.12.]; Permit Condition 4.1.6.

Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Permit Condition 4.3.1.

Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Permit Condition 4.3.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:
Visual emission checks for opacity limits - [45CSR§30-5.1.c.]; Title V Permit Condition 3.2.1

Testing:
Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.
Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.

Recordkeeping:
Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.

Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Reporting:
Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.

Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.

Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.

Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Are you in compliance with all applicable requirements for this emission unit? __X__ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F.**

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU013	Caster Cutoff Torches	CE005 – Melt Shop/Caster Building

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive emissions associated with cutting torches used to size the cast steel billets.
Natural gas and oxygen flame torches are used.
This unit is treated as a manufacturing process source.

Manufacturer:	**Model number:**	**Serial number:**
Concast		
Construction date:	**Installation date:**	**Modification date(s):**
06/01/1974	06/01/1975	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Able to manage sizing of 40 tons/hr of billet steel
Estimated to use 0.2 MMBtu/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.2 Mcf/hr	1.72 MMcf/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_Yes __ No	**If yes, is it?** ___ Indirect Fired _X_ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 0.2 MMBtu/hr	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Primary fuel is natural gas
Maximum hourly fuel usage: 0.2 Mscf/hr
Maximum annual fuel usage: 1.72 MMscf/hr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	15 ppmv	Unknown	1020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.016	0.072
Nitrogen Oxides (NO_X)	0.02	0.09
Lead (Pb)	9.8E-08	4.29E-07
Particulate Matter ($PM_{2.5}$)	1.28	5.61
Particulate Matter (PM_{10})	1.28	5.61
Total Particulate Matter (TSP)	1.28	5.61
Sulfur Dioxide (SO_2)	1.2E-04	5.2E-04
Volatile Organic Compounds (VOC)	1.1E-03	4.7E-03
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
2-Methylnaphthalene	4.7E-09	2.06E-08
3-Methylchloranthrene	3.5E-10	1.55E-09
7,12-Dimethylbenz(a)anthracene	3.1E-09	1.37E-08
Acenaphthene	3.5E-10	1.55E-09
Acenaphthylene	3.5E-10	1.55E-09
Anthracene	4.7E-10	2.06E-09
Benz(a)anthracene	3.5E-10	1.55E-09
Benzene	4.1E-07	1.80E-06
Benzo(a)pyrene	2.4E-10	1.03E-09
Benzo(b)fluoranthene	3.5E-10	1.55E-09
Benzo(g,h,i)perylene	2.4E-10	1.03E-09
Benzo(k)fluoranthene	3.5E-10	1.55E-09
Chrysene	3.5E-10	1.55E-09
Dibenzo(a,h) anthracene	2.4E-10	1.03E-09
Dichlorobenzene	2.4E-07	1.03E-06
Fluoranthene	5.9E-10	2.58E-09
Fluorene	5.5E-10	2.40E-09
Formaldehyde	1.5E-05	6.44E-05
Hexane	3.5E-04	1.55E-03
Indo(1,2,3-cd)pyrene	3.5E-10	1.55E-09
Napthalene	1.2E-07	5.24E-07
Phenanthrene	3.3E-09	1.46E-08

Pyrene	9.8E-10	4.29E-09
Toluene	6.7E-07	2.92E-06
Arsenic	3.9E-08	1.72E-07
Beryllium	2.4E-09	1.03E-08
Cadmium	2.2E-07	9.45E-07
Chromium	2.7E-07	1.20E-06
Cobalt	1.6E-08	7.21E-08
Manganese	7.5E-08	3.26E-07
Mercury	5.1E-08	2.23E-07
Nickel	4.1E-07	1.80E-06
Selenium	4.7E-09	2.06E-08
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Emissions are generated from combustion of natural gas and from metal vaporization.
Emission calculations are based on natural gas combustion and billet metal removed.

Filterable PM - AP-42 Table 1.4-1 (07/98)
Condensable PM - AP-42 Table 12.5.1-1 (04/09)
Other Criteria Pollutants - AP-42 Table 1.4-1 and 1.4-2 (07/98)
HAPs - AP-42 Tables 1.4-3 and 1.4-4 (07/98)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

20% Opacity Limit - [45CSR§7-3.1.]; Title V Permit Condition 4.1.1.

Maximum Allowable PM Emission Limit (lb/hr): 32.2 - [45CSR§7-4.1.]; Permit Condition 4.1.3.

No circumvention of exhaust - [45CSR§7-4.3.]; Title V Permit Condition 4.1.4.

Establish stack flow patterns consistent with acceptable stack sampling procedures - [45CSR§7-4.12.]; Permit Condition 4.1.6.

Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Permit Condition 4.3.1.

Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Permit Condition 4.3.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:
Visual emission checks for opacity limits - [45CSR§30-5.1.c.]; Title V Permit Condition 3.2.1

Testing:
Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.
Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.

Recordkeeping:
Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.

Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Reporting:
Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.

Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.

Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.

Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU014	Reheat Furnace #1	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
A direct-fired natural gas furnace used to heat steel billets prior to hot rolling. Based on West Virginia regulations, this unit is treated as a manufacturing process. AP-42 emission factors are used to calculate emissions while the allowable emission rate is based on process weight rate.

Emissions are vented to Stack S014

Manufacturer:	**Model number:**	**Serial number:**
Brickmont		
Construction date:	**Installation date:**	**Modification date(s):**
06/01/1984	06/01/1984	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
96 MMBtu/hr heat input
Able to process 40 tons/hr of steel

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
94 Mcf/hr	824 MMcf/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_Yes __ No	**If yes, is it?** ___ Indirect Fired _X_ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 96 MMBtu/hr	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Primary fuel is natural gas
Maximum hourly fuel usage: 94 Mcf/hr
Maximum annual fuel usage: 824 MMcf/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	15 ppmv	Unknown	1020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.12	0.55
Nitrogen Oxides (NO_X)	18.24	79.89
Lead (Pb)	4.7E-05	2.06E-04
Particulate Matter ($PM_{2.5}$)	0.51	2.24
Particulate Matter (PM_{10})	0.51	2.24
Total Particulate Matter (TSP)	0.51	2.24
Sulfur Dioxide (SO_2)	0.06	0.25
Volatile Organic Compounds (VOC)	0.03	0.13
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
2-Methylnaphthalene	2.3E-06	9.89E-06
3-Methylchloranthrene	1.7E-07	7.42E-07
7,12-Dimethylbenz(a)anthracene	1.5E-06	6.60E-06
Acenaphthene	1.7E-07	7.42E-07
Acenaphthylene	1.7E-07	7.42E-07
Anthracene	2.3E-07	9.89E-07
Benz(a)anthracene	1.7E-07	7.42E-07
Benzene	2.0E-04	8.66E-04
Benzo(a)pyrene	1.1E-07	4.95E-07
Benzo(b)fluoranthene	1.7E-07	7.42E-07
Benzo(g,h,i)perylene	1.1E-07	4.95E-07
Benzo(k)fluoranthene	1.7E-07	7.42E-07
Chrysene	1.7E-07	7.42E-07
Dibenzo(a,h) anthracene	1.1E-07	4.95E-07
Dichlorobenzene	1.1E-04	4.95E-04
Fluoranthene	2.8E-07	1.24E-06
Formaldehyde	2.6E-07	1.15E-06
Fluorene	7.1E-03	3.09E-02
Hexane	1.7E-01	7.42E-01
Indo(1,2,3-cd)pyrene	1.7E-07	7.42E-07
Napthalene	5.7E-05	2.51E-04
Phenanthrene	1.6E-06	7.01E-06

Pyrene	4.7E-07	2.06E-06
Toluene	3.2E-04	1.40E-03
Arsenic	1.9E-05	8.24E-05
Beryllium	1.1E-06	4.95E-06
Cadmium	1.0E-04	4.53E-04
Chromium	1.3E-04	5.77E-04
Cobalt	7.9E-06	3.46E-05
Manganese	3.6E-05	1.57E-04
Mercury	2.4E-05	1.07E-04
Nickel	2.0E-04	8.66E-04
Selenium	2.3E-06	9.89E-06
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

SO_2 – AP-42, Table 1.4-2
Other Criteria Pollutants – AP-42, Table 12.5.1-1, 12.5.1-2, 12.5.1-4, 12.5.1-5, and 12.5.1-8 (04/09)
HAPs - AP-42 Tables 1.4-3 and 1.4-4 (07/98)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

20% Opacity Limit - [45CSR§7-3.1.]; Title V Permit Condition 4.1.1.

Maximum Allowable PM Emission Limit (lb/hr): 33.4 - [45CSR§7-4.1.]; Permit Condition 4.1.3.

No circumvention of exhaust - [45CSR§7-4.3.]; Title V Permit Condition 4.1.4.

Establish stack flow patterns consistent with acceptable stack sampling procedures - [45CSR§7-4.12.]; Title V Permit Condition 4.1.6.

Sulfur Dioxide Emission Limit 2,000 parts per million by volume - [45CSR§10-4.1. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.1.8.

Testing and/or monitoring to demonstrate compliance with SO_2 emission limit - [45CSR§10-8.2.c. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.2.2.

Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.

Stack testing if required by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.

Recordkeeping of required monitoring data for a minimum of 5 years - [45CSR§10-8.3.a. *(EU006, EU007, EU014, EU016)*]; Permit Condition 4.4.1.

Submission of exception report - [45CSR§10-8.3.b. *(EU006, EU007, EU014, EU016)*]; Permit Condition 4.5.1.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:
Visual emission checks for opacity limits - [45CSR§30-5.1.c.]; Title V Permit Condition 3.2.1
Testing and/or monitoring to demonstrate compliance with SO_2 emission limit - [45CSR§10-8.2.c. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.2.2.

Testing:
Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Permit Condition 4.3.1.
Stack testing if required by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.
Testing and/or monitoring to demonstrate compliance with SO_2 emission limit - [45CSR§10-8.2.c. *(EU006, EU007, EU014, EU016)*]; Permit Condition 4.2.2.

Recordkeeping:
Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.

Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Recordkeeping of required monitoring data for a minimum of 5 years - [45CSR§10-8.3.a. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.4.1.

Reporting:

Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2. Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4. Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5. Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6. Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8. Submission of exception report - [45CSR§10-8.3.b. *(EU006, EU007, EU014, EU016)*]; Permit Condition 4.5.1.
Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___ No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU015	Hot Rolling Mill #1	CE015 - #1 Mill Building

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive particulate emissions generated from mill scale breaking during rolling operations.
Rolling Mill #1 is able to process 40 tons/hr of heated steel billets.
The billets are rolled into shapes having various cross-sections.

Manufacturer:	**Model number:**	**Serial number:**
Meeco		
Construction date:	**Installation date:**	**Modification date(s):**
06/01/1985	06/01/1985	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Process operations performed on a maximum of 40 tons/hr of steel.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
40 tons/hr	350,400 tons/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes _X_ No	**If yes, is it?** ___ Indirect Fired __ Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	0.77	3.36
Particulate Matter (PM_{10})	0.77	3.36
Total Particulate Matter (TSP)	0.77	3.36
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	NA	NA
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Particulate matter emissions calculated based on quantities of mill scale generated per ton of steel rolled (SWVA site-specific emission factor).

PM emissions assume that 20% of the mill scale becomes airborne.

The #1 Mill Building captures and controls 70% of the particulate emissions.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

20% Opacity Limit - [45CSR§7-3.1.]; Title V Permit Condition 4.1.1.

Maximum Allowable PM Emission Limit (lb/hr): 32.2 - [45CSR§7-4.1.]; Permit Condition 4.1.3.

No circumvention of exhaust - [45CSR§7-4.3.]; Title V Permit Condition 4.1.4.

Establish stack flow patterns consistent with acceptable stack sampling procedures - [45CSR§7-4.12.]; Permit Condition 4.1.6.

Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Permit Condition 4.3.1.

Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Permit Condition 4.3.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:
Visual emission checks for opacity limits - [45CSR§30-5.1.c.]; Title V Permit Condition 3.2.1

Testing:
Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.
Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.

Recordkeeping:
Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.
Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Reporting:
Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.
Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.
Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.
Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.
Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Are you in compliance with all applicable requirements for this emission unit? __X__ Yes ___ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F.**

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU016	Reheat Furnace #2	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
A direct-fired natural gas furnace used to heat steel billets prior to hot rolling. Based on West Virginia regulations, this unit is treated as a manufacturing process. AP-42 emission factors are used to calculate emissions while the allowable emission rate is based on process weight rate.
Emissions are vented to Stack S016.

Manufacturer:	**Model number:**	**Serial number:**
Bricmont		
Construction date:	**Installation date:**	**Modification date(s):**
06/01/1957	06/01/1957	06/01/1997

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
130 MMBtu/hr heat input
Able to process 32 tons/hr of steel

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
127 Mcf/hr	1,116 MMcf/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_Yes __ No	**If yes, is it?** ___ Indirect Fired _X_ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 130 MMBtu/hr	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Primary fuel is natural gas.
Maximum hourly fuel usage: 127 Mcf/hr
Maximum annual fuel usage: 1,116 MMcf/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	15 ppmv	Unknown	1020 BTU/scf

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.17	0.74
Nitrogen Oxides (NO_X)	24.70	108.19
Lead (Pb)	6.4E-05	2.79E-04
Particulate Matter ($PM_{2.5}$)	1.66	7.29
Particulate Matter (PM_{10})	1.66	7.29
Total Particulate Matter (TSP)	1.66	7.29
Sulfur Dioxide (SO_2)	0.08	0.33
Volatile Organic Compounds (VOC)	0.04	0.17
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
2-Methylnaphthalene	3.1E-06	1.34E-05
3-Methylchloranthrene	2.3E-07	1.00E-06
7,12-Dimethylbenz(a)anthracene	2.0E-06	8.93E-06
Acenaphthene	2.3E-07	1.00E-06
Acenaphthylene	2.3E-07	1.00E-06
Anthracene	3.1E-07	1.34E-06
Benz(a)anthracene	2.3E-07	1.00E-06
Benzene	2.7E-04	1.17E-03
Benzo(a)pyrene	1.5E-07	6.70E-07
Benzo(b)fluoranthene	2.3E-07	1.00E-06
Benzo(g,h,i)perylene	1.5E-07	6.70E-07
Benzo(k)fluoranthene	2.3E-07	1.00E-06
Chrysene	2.3E-07	1.00E-06
Dibenzo(a,h) anthracene	1.5E-07	6.70E-07
Dichlorobenzene	1.5E-04	6.70E-04
Fluoranthene	3.8E-07	1.67E-06
Fluorene	3.6E-07	1.56E-06
Formaldehyde	9.6E-03	4.19E-02
Hexane	2.3E-01	1.00E+00
Indo(1,2,3-cd)pyrene	2.3E-07	1.00E-06
Napthalene	7.8E-05	3.41E-04
Phenanthrene	2.2E-06	9.49E-06
Pyrene	6.4E-07	2.79E-06

Toluene	4.3E-04	1.90E-03
Arsenic	2.5E-05	1.12E-04
Beryllium	1.5E-06	6.70E-06
Cadmium	1.4E-04	6.14E-04
Chromium	1.8E-04	7.82E-04
Cobalt	1.1E-05	4.69E-05
Manganese	4.8E-05	2.12E-04
Mercury	3.3E-05	1.45E-04
Nickel	2.7E-04	1.17E-03
Selenium	4.8E-05	2.12E-04
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

SO_2 – AP-42, Table 1.4-2
Other Criteria Pollutants – AP-42, Table 12.5.1-1, 12.5.1-2, 12.5.1-4, 12.5.1-5, and 12.5.1-8 (04/09)
HAPs - AP-42 Tables 1.4-3 and 1.4-4 (07/98)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

20% Opacity Limit - [45CSR§7-3.1.]; Title V Permit Condition 4.1.1.

Maximum Allowable PM Emission Limit (lb/hr): 21.9 - [45CSR§7-4.1.]; Permit Condition 4.1.3.

No circumvention of exhaust - [45CSR§7-4.3.]; Title V Permit Condition 4.1.4.

Allowable emissions for duplicate source operation - [45CSR§7-4.4. *(EU016, EU017)*]; Permit Condition 4.1.5.

Establish stack flow patterns consistent with acceptable stack sampling procedures - [45CSR§7-4.12.]; Title V Permit Condition 4.1.6.

Sulfur Dioxide Emission Limit 2,000 parts per million by volume - [45CSR§10-4.1. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.1.8.

Testing and/or monitoring to demonstrate compliance with SO_2 emission limit - [45CSR§10-8.2.c. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.2.2.

Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.

Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.

Recordkeeping of required monitoring data for a minimum of 5 years - [45CSR§10-8.3.a. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.4.1.

Submission of exception report - [45CSR§10-8.3.b. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.5.1.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:

Visual emission checks for opacity limits - [45CSR§30-5.1.c.]; Title V Permit Condition 3.2.1

Testing and/or monitoring to demonstrate compliance with SO2 emission limit - [45CSR§10-8.2.c. (EU006, EU007, EU014, EU016)]; Title V Permit Condition 4.2.2.

Testing:

Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.

Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.Testing and/or monitoring to demonstrate compliance with SO2 emission limit - [45CSR§10-8.2.c. (EU006, EU007, EU014, EU016)]; Title V Permit Condition 4.2.2.

Recordkeeping:

Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.

Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Recordkeeping of required monitoring data for a minimum of 5 years - [45CSR§10-8.3.a. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.4.1.

Reporting:

Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.

Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.

Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.

Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Submission of exception report - [45CSR§10-8.3.b. *(EU006, EU007, EU014, EU016)*]; Title V Permit Condition 4.5.1.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU017	Hot Rolling Mill #2	CE017 - #2 Mill Building

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive particulate emissions generated from mill scale breaking during rolling operations.
Rolling Mill #2 is able to process 36.8 tons/hr of heated steel billets.
The billets are rolled into shapes having various cross-sections.

Manufacturer:	**Model number:**	**Serial number:**
Meeco/SWVA		
Construction date:	**Installation date:**	**Modification date(s):**
06/01/1994	06/01/1994	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Process operations performed on a maximum of 36.8 tons/hr of steel.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
36.8 tons/hr	322,368 tons/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes _X_ No	**If yes, is it?** ___ Indirect Fired __ Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	0.71	3.09
Particulate Matter (PM_{10})	0.71	3.09
Total Particulate Matter (TSP)	0.71	3.09
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	NA	NA
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Particulate matter emissions calculated based on quantities of mill scale generated per ton of steel rolled (SWVA site-specific emission factor).

PM emissions assume that 20% of the mill scale becomes airborne.

The #1 Mill Building captures and controls 70% of the particulate emissions.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

20% Opacity Limit - [45CSR§7-3.1.]; Title V Permit Condition 4.1.1.

Maximum Allowable PM Emission Limit (lb/hr): 14.3 - [45CSR§7-4.1.]; Permit Condition 4.1.3.

No circumvention of exhaust - [45CSR§7-4.3.]; Title V Permit Condition 4.1.4.

Establish stack flow patterns consistent with acceptable stack sampling procedures - [45CSR§7-4.12.]; Permit Condition 4.1.6.

Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Permit Condition 4.3.1.

Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Permit Condition 4.3.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:
Visual emission checks for opacity limits - [45CSR§30-5.1.c.]; Title V Permit Condition 3.2.1

Testing:
Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.
Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.

Recordkeeping:
Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.

Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Reporting:
Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.

Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.

Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.

Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Are you in compliance with all applicable requirements for this emission unit? __X__ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F.**

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU020	Paint Application	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive emissions associated with painting fabricated steel pieces.
Compliant coatings are used.
This unit is treated as an air-dried coating process source.

Manufacturer:	**Model number:**	**Serial number:**

Construction date:	**Installation date:**	**Modification date(s):**
06/01/1997	06/01/1997	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
20 gal/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
20 gal/hr	65,200 gal/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes _X_ No	**If yes, is it?** ___ Indirect Fired __ Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	NA	NA
Particulate Matter (PM_{10})	NA	NA
Total Particulate Matter (TSP)	NA	NA
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	0.57	2.50
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	NA	NA
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

SDS for Low VOC Waterborne Black Primer from Farrell-Calhoun dated 1/9/2018

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Certification of method of compliance for coating line - [45CSR§21-4.3.a. *(EU020, EU023)*]; Permit Condition 6.1.1.; [45CSR§21-4.4.a. *(EU020, EU023)*]; Title V Permit Condition 6.1.2.

VOC emission limitation of 3.5 lbs per volume of coating in gallons for coating line - [45CSR§21-19.3.a.4. *(EU020, EU023)*]; Title V Permit Condition 6.1.3.

HAP emission limitation of 5.7 tons per year (rolling total) for paint application – [45CSR§30-12.7.]; Title V Permit Condition 6.1.5.

Daily recordkeeping of the name and ID number of each coating and mass of VOC per volume of coating applied. Maintain records for 3 years. – [45CSR§21-4.3.b. *(EU020, EU023)*]; Title V Permit Condition 6.4.1

Daily recordkeeping of records required by Condition 6.4.1. and daily weighted average of VOC content of all coatings. Maintain records for 3 years. – [45CSR§21-4.4.b. *(EU020, EU023)*]; Title V Permit Condition 6.4.2.

Compliance with certification, recordkeeping, and reporting requirements of permit conditions 6.1.1., 6.4.1., & 6.5.1. - [45CSR§21-19.7.b. *(EU020, EU023)*]; Title V Permit Condition 6.4.3.

Compliance with certification, recordkeeping, and reporting requirements of permit conditions 6.1.2., 6.4.2., & 6.5.2. - [45CSR§21-19.7.c. *(EU020, EU023)*]; Title V Permit Condition 6.4.4.

Calculation method for daily weighted average of VOC - [45CSR§21-43.1. *(EU020, EU023)*]; Title V Permit Condition 6.4.5.

Recordkeeping of amount and type of coatings applied HAP emissions (rolling 12-month basis) - [45CSR§30-5.1.c. *(EU020)*]; Title V Permit Condition 6.4.6.

Report use on non-complying coatings within 30 days. Submit notification 30 days prior to changing means of compliance for coatings.- [45CSR§21-4.3.c. *(EU020, EU023)*]; Permit Condition 6.5.1.; [45CSR§21-4.4.c. *(EU020, EU023)*]; Title V Permit Condition 6.5.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Recordkeeping:

Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.

Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Daily recordkeeping of the name and ID number of each coating and mass of VOC per volume of coating applied. Maintain records for 3 years. – [45CSR§21-4.3.b. (EU020, EU023)]; Title V Permit Condition 6.4.1

Daily recordkeeping of records required by Condition 6.4.1. and daily weighted average of VOC content of all coatings. Maintain records for 3 years. – [45CSR§21-4.4.b. (EU020, EU023)]; Title V Permit Condition 6.4.2.

Compliance with certification, recordkeeping, and reporting requirements of permit conditions 6.1.1., 6.4.1., & 6.5.1. - [45CSR§21-19.7.b. (EU020, EU023)]; Title V Permit Condition 6.4.3.

Compliance with certification, recordkeeping, and reporting requirements of permit conditions 6.1.2., 6.4.2., & 6.5.2. - [45CSR§21-19.7.c. (EU020, EU023)]; Title V Permit Condition 6.4.4.

Recordkeeping of amount and type of coatings applied HAP emissions (rolling 12-month basis) - [45CSR§30-5.1.c. (EU020)]; Title V Permit Condition 6.4.6.

Reporting:

Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.

Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.

Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.

Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Report use on non-complying coatings within 30 days. Submit notification 30 days prior to changing means of compliance for coatings.- [45CSR§21-4.3.c. *(EU020, EU023)*]; Permit Condition 6.5.1.; [45CSR§21-4.4.c. *(EU020, EU023)*]; Title V Permit Condition 6.5.2.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU021	Paint Drying Oven	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
A direct-fired natural gas oven used to air-dry coatings.
Oven design capacity is 4 MMBtu/hr
Emissions are vented to Stack S021

Manufacturer:	**Model number:**	**Serial number:**

Construction date:	**Installation date:**	**Modification date(s):**
06/01/1997	06/01/1997	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
4 MMBtu/hr heat input

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
4 Mcf/hr	34 MMcf/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_Yes __ No	**If yes, is it?** ___ Indirect Fired _X_ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 4 MMBtu/hr	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Primary fuel is natural gas.
Maximum hourly fuel usage: 4 Mcf/hr
Maximum annual fuel usage: 34 MMcf/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	15 ppmv	Unknown	1020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.33	1.44
Nitrogen Oxides (NO_X)	0.39	1.72
Lead (Pb)	2.0E-06	8.75E-06
Particulate Matter ($PM_{2.5}$)	0.03	0.13
Particulate Matter (PM_{10})	0.03	0.13
Total Particulate Matter (TSP)	0.03	0.13
Sulfur Dioxide (SO_2)	0.002	0.01
Volatile Organic Compounds (VOC)	0.02	0.09
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
2-Methylnaphthalene	9.4E-08	4.12E-07
3-Methylchloranthrene	7.1E-09	3.09E-08
7,12-Dimethylbenz(a)anthracene	6.3E-08	2.75E-07
Acenaphthene	7.1E-09	3.09E-08
Acenaphthylene	7.1E-09	3.09E-08
Anthracene	9.4E-09	4.12E-08
Benz(a)anthracene	7.1E-09	3.09E-08
Benzene	8.2E-06	3.61E-05
Benzo(a)pyrene	4.7E-09	2.06E-08
Benzo(b)fluoranthene	7.1E-09	3.09E-08
Benzo(g,h,i)perylene	4.7E-09	2.06E-08
Benzo(k)fluoranthene	7.1E-09	3.09E-08
Chrysene	7.1E-09	3.09E-08
Dibenzo(a,h) anthracene	4.7E-09	2.06E-08
Dichlorobenzene	4.7E-06	2.06E-05
Fluoranthene	1.2E-08	5.15E-08
Fluorene	1.1E-08	4.81E-08
Formaldehyde	2.9E-04	1.29E-03
Hexane	7.1E-03	3.09E-02
Indo(1,2,3-cd)pyrene	7.1E-09	3.09E-08
Napthalene	2.4E-06	1.05E-05
Phenanthrene	6.7E-08	2.92E-07

Pyrene	2.0E-08	8.59E-08
Toluene	1.3E-05	5.84E-05
Arsenic	7.8E-07	3.44E-06
Beryllium	4.7E-08	2.06E-07
Cadmium	4.3E-06	1.89E-05
Chromium	5.5E-06	2.40E-05
Cobalt	3.3E-07	1.44E-06
Manganese	2.0E-06	8.59E-06
Mercury	1.5E-06	6.53E-06
Nickel	1.0E-06	4.47E-06
Selenium	8.2E-06	3.61E-05
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, 5th Edition, January 1995, Section 1.4, Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4.

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included. NA
___ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) NA
Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU022	Continuous Wax Line Heater	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
An indirect process heater firing natural gas to heat wax prior to application.
Heater capacity is 4 MMBtu/hr
Emissions are vented to Stack S022

Manufacturer:	**Model number:**	**Serial number:**

Construction date:	**Installation date:**	**Modification date(s):**
06/01/1997	06/01/1997	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
4 MMBtu/hr heat input

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
3.9 Mcf/hr	34 MMcf/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_Yes __ No	**If yes, is it?** _X__ Indirect Fired __ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 4 MMBtu/hr	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Primary fuel is natural gas.
Maximum hourly fuel usage: 3.9 Mcf/hr
Maximum annual fuel usage: 34 MMcf/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	15 ppmv	Unknown	1020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.33	1.44
Nitrogen Oxides (NO_X)	0.39	1.72
Lead (Pb)	2.0E-06	8.59E-06
Particulate Matter ($PM_{2.5}$)	0.03	0.13
Particulate Matter (PM_{10})	0.03	0.13
Total Particulate Matter (TSP)	0.03	0.13
Sulfur Dioxide (SO_2)	0.002	0.01
Volatile Organic Compounds (VOC)	0.02	0.09
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
2-Methylnaphthalene	9.4E-08	4.12E-07
3-Methylchloranthrene	7.1E-09	3.09E-08
7,12-Dimethylbenz(a)anthracene	6.3E-08	2.75E-07
Acenaphthene	7.1E-09	3.09E-08
Acenaphthylene	7.1E-09	3.09E-08
Anthracene	9.4E-09	4.12E-08
Benz(a)anthracene	7.1E-09	3.09E-08
Benzene	8.2E-06	3.61E-05
Benzo(a)pyrene	4.7E-09	2.06E-08
Benzo(b)fluoranthene	7.1E-09	3.09E-08
Benzo(g,h,i)perylene	4.7E-09	2.06E-08
Benzo(k)fluoranthene	7.1E-09	3.09E-08
Chrysene	7.1E-09	3.09E-08
Dibenzo(a,h) anthracene	4.7E-09	2.06E-08
Dichlorobenzene	4.7E-06	2.06E-05
Fluoranthene	1.2E-08	5.15E-08
Fluorene	1.1E-08	4.81E-08
Formaldehyde	2.9E-04	1.29E-03
Hexane	7.1E-03	3.09E-02
Indo(1,2,3-cd)pyrene	7.1E-09	3.09E-08
Napthalene	2.4E-06	1.05E-05
Phenanthrene	6.7E-08	2.92E-07

Pyrene	2.0E-08	8.59E-08
Toluene	1.3E-05	5.84E-05
Arsenic	7.8E-07	3.44E-06
Beryllium	4.7E-08	2.06E-07
Cadmium	4.3E-06	1.89E-05
Chromium	5.5E-06	2.40E-05
Cobalt	3.3E-07	1.44E-06
Mercury	1.0E-06	4.47E-06
Nickel	8.2E-06	3.61E-05
Selenium	9.4E-08	4.12E-07
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, 5th Edition, January 1995, Section 1.4, Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

10% Opacity Limit - [45CSR§2-3.1]; Title V Permit Condition 5.1.1.

Operate and maintain with good operating practices. Fuel limited to natural gas. – [45CSR§30-5.1.c.]; Title V Permit Condition 5.2.1.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:
Visual emission checks for opacity limits - [45CSR§30-5.1.c.]; Title V Permit Condition 3.2.1

Testing:
NA

Recordkeeping:
Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.

Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Reporting:
Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.

Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.

Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.

Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU023	Wax Application	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive emissions associated with coating fabricated steel pieces.
Compliant coatings are used.
This unit is treated as an air-dried coating process source.
The same type of wax is applied at two different locations.
One wax application process is a batch while the other is a continuous process.

Manufacturer:	**Model number:**	**Serial number:**

Construction date:	**Installation date:**	**Modification date(s):**
06/01/1997	06/01/1997	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
33 gal/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
33 gal/hr	287,500 gal/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes _X_ No	**If yes, is it?** ___ Indirect Fired __ Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

The heater for the continuous line is listed as EU022.
The heater for the batch dip line is electrical.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	NA	NA
Particulate Matter (PM_{10})	NA	NA
Total Particulate Matter (TSP)	NA	NA
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	3.28	14.38
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Daughbert Chemical Company MSDS for product name: NON-RUST 1210 (02/19/03)

VOC content as applied (including water and exempt compounds): <0.1 lb/gal

VOC content (excluding water and exempt compounds): <0.1 lb/gal

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Certification of method of compliance for coating line - [45CSR§21-4.3.a. *(EU020, EU023)*]; Permit Condition 6.1.1.; [45CSR§21-4.4.a. *(EU020, EU023)*]; Title V Permit Condition 6.1.2.

VOC emission limitation of 3.5 lbs per volume of coating in gallons for coating line - [45CSR§21-19.3.a.4. *(EU020, EU023)*]; Title V Permit Condition 6.1.3.

HAP emission limitation of 5.7 tons per year (rolling total) for paint application – [45CSR§30-12.7.]; Title V Permit Condition 6.1.5.

Daily recordkeeping of the name and ID number of each coating and mass of VOC per volume of coating applied. Maintain records for 3 years. – [45CSR§21-4.3.b. *(EU020, EU023)*]; Title V Permit Condition 6.4.1

Daily recordkeeping of records required by Condition 6.4.1. and daily weighted average of VOC content of all coatings. Maintain records for 3 years. – [45CSR§21-4.4.b. *(EU020, EU023)*]; Title V Permit Condition 6.4.2.

Compliance with certification, recordkeeping, and reporting requirements of permit conditions 6.1.1., 6.4.1., & 6.5.1. - [45CSR§21-19.7.b. *(EU020, EU023)*]; Title V Permit Condition 6.4.3.

Compliance with certification, recordkeeping, and reporting requirements of permit conditions 6.1.2., 6.4.2., & 6.5.2. - [45CSR§21-19.7.c. *(EU020, EU023)*]; Title V Permit Condition 6.4.4.

Calculation method for daily weighted average of VOC - [45CSR§21-43.1. *(EU020, EU023)*]; Title V Permit Condition 6.4.5.

Report use on non-complying coatings within 30 days. Submit notification 30 days prior to changing means of compliance for coatings.- [45CSR§21-4.3.c. *(EU020, EU023)*]; Permit Condition 6.5.1.; [45CSR§21-4.4.c. *(EU020, EU023)*]; Title V Permit Condition 6.5.2.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Recordkeeping:

Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.

Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Daily recordkeeping of the name and ID number of each coating and mass of VOC per volume of coating applied. Maintain records for 3 years. – [45CSR§21-4.3.b. (EU020, EU023)]; Title V Permit Condition 6.4.1

Daily recordkeeping of records required by Condition 6.4.1. and daily weighted average of VOC content of all coatings. Maintain records for 3 years. – [45CSR§21-4.4.b. (EU020, EU023)]; Title V Permit Condition 6.4.2.

Compliance with certification, recordkeeping, and reporting requirements of permit conditions 6.1.1., 6.4.1., & 6.5.1. - [45CSR§21-19.7.b. (EU020, EU023)]; Title V Permit Condition 6.4.3.

Compliance with certification, recordkeeping, and reporting requirements of permit conditions 6.1.2., 6.4.2., & 6.5.2. - [45CSR§21-19.7.c. (EU020, EU023)]; Title V Permit Condition 6.4.4.

Reporting:

Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.

Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.

Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.

Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Report use on non-complying coatings within 30 days. Submit notification 30 days prior to changing means of compliance for coatings.- [45CSR§21-4.3.c. *(EU020, EU023)*]; Permit Condition 6.5.1.; [45CSR§21-4.4.c. *(EU020, EU023)*]; Title V Permit Condition 6.5.2.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU024	Shot Blaster	CE024 Shotblast Baghouse

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Mill scale is removed from the surface of steel pieces utilizing steel shot as the cleaning media. Particulate matter emissions are exhausted to the baghouse.
Baghouse emissions are emitted through Stack S024.

Manufacturer:	**Model number:**	**Serial number:**
Blast Cleaning Products		
Construction date:	**Installation date:**	**Modification date(s):**
06/01/1986	06/01/1986	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
2.43 tons/hr of steel pieces

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
2.43 tons/hr of steel pieces	21,286 tons/yr of steel pieces	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes _X_ No	**If yes, is it?** ___ Indirect Fired __ Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	0.295	2.15
Particulate Matter (PM_{10})	0.295	2.15
Total Particulate Matter (TSP)	0.295	2.15
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	NA	NA
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential Emission Factor of 0.202 lb of PM/ton of steel processed, based on SWVA material balance. Assumes 99% capture/control efficiency of baghouse (accounted for in the factor).

Hourly emission rate based on Title V permit condition 4.1.9.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

20% Opacity Limit - [45CSR§7-3.1.]; Title V Permit Condition 4.1.1.

No circumvention of exhaust - [45CSR§7-4.3.]; Title V Permit Condition 4.1.4.

Establish stack flow patterns consistent with acceptable stack sampling procedures - [45CSR§7-4.12.]; Title V Title V Permit Condition 4.1.6.

Particulate Matter emission limit of 0.295 lb/hr - [45CSR13 - Permit R13-0834, Condition (A) and 45CSR§7-4.1. *(EU024)*]; Permit Condition 4.1.9.

Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.

Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.

Visible emission checks in accordance with condition 3.2.1. Monthly recordkeeping of tons of steel produced and operating hours of the shot blaster. - [45CSR§30-5.1.c. *(EU024)*]; Title V Permit Condition 4.4.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:

Visual emission checks for opacity limits - [45CSR§30-5.1.c.]; Title V Permit Condition 3.2.1

Visible emission checks in accordance with condition 3.2.1. - [45CSR§30-5.1.c. (EU024)]; Title V Permit Condition 4.4.2.

Testing:

Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.

Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.

Recordkeeping:

Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.

Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Monthly recordkeeping of tons of steel produced and operating hours of the shot blaster. - [45CSR§30-5.1.c. *(EU024)*]; Title V Permit Condition 4.4.2.

Reporting:

Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.

Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.

Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.

Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU025	Welding	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive particulate emissions generated from robotic or manual welding operations.
MIG welding is performed at various locations at the east end of the facility.
This operation can process 10 tons/hr of steel shapes and pieces.
Emissions are based upon the weight of welding wire used.

Manufacturer:	**Model number:**	**Serial number:**
Trucut/SWVA/Y&L		

Construction date:	**Installation date:**	**Modification date(s):**
06/01/1985	06/01/1986	04/01/2003

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Process operations performed on a maximum of 10 tons/hr of steel.
Throughput, given below, is the weight (M=1000) of welding wire used.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.060 M lb/hr	526 M lb/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes _X_ No	**If yes, is it?** ___ Indirect Fired __ Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	0.312	1.368
Particulate Matter (PM_{10})	0.312	1.368
Total Particulate Matter (TSP)	0.312	1.368
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	NA	NA
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Chromium	6.0E-04	2.6E-03
Cobalt	6.0E-04	2.6E-03
Manganese	1.9E-01	8.4E-01
Nickel	6.0E-04	2.6E-03
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
None		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, 5th Edition, January 1995, Section 12.19 for GMAW and E70S electrode.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

20% Opacity Limit - [45CSR§7-3.1.]; Title V Permit Condition 4.1.1.

Maximum Allowable PM Emission Limit (lb/hr): 14.3 - [45CSR§7-4.1.]; Permit Condition 4.1.3.

No circumvention of exhaust - [45CSR§7-4.3.]; Title V Permit Condition 4.1.4.

Establish stack flow patterns consistent with acceptable stack sampling procedures - [45CSR§7-4.12.]; Title V Permit Condition 4.1.6.

Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.

Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Monitoring:
Visual emission checks for opacity limits - [45CSR§30-5.1.c.]; Title V Permit Condition 3.2.1

Testing:
Emission testing requirements - [45CSR§§7A-3.1.a., b., c., d., and e.]; Title V Permit Condition 4.3.1.
Stack testing if requested by the Director - [45CSR§10-8.1.a.]; Title V Permit Condition 4.3.2.

Recordkeeping:
Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.

Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Reporting:
Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.

Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.

Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.

Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU026	Cold Cleaner	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive emissions associated with cold cleaning solvent.
Items to be cleaned include metal process equipment parts during maintenance work.
The solvent is used to remove grease, oil, paint or other petroleum based products.

Manufacturer:	**Model number:**	**Serial number:**
Safety Kleen		
Construction date:	**Installation date:**	**Modification date(s):**
06/01/1975	06/01/1975	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
0.3 gal/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.3 gal/hr	2900 gal/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes _X_ No	**If yes, is it?** ___ Indirect Fired __ Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	NA	NA
Particulate Matter (PM_{10})	NA	NA
Total Particulate Matter (TSP)	NA	NA
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	2.05	8.99
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
None		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Safety Kleen delivers and picks up the cold cleaner. Purchasing records are used to calculate the difference (material balance).
Safety Kleen Premium Solvent and Safety Kleen ArmaKleen are both used. The SDS for Premium Solvent provides a more conservative VOC content of 6.84 lb/gal.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Work practice requirements for cold cleaning facility - [45CSR§21-30.3.a. *(EU026)*]; Title V Permit Condition 6.1.4.

_X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Recordkeeping:
Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.

Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Reporting:
Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.

Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.

Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.

Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F.**

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU027	Scrap Cut-up Torches	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive emissions associated with cutting torches used to size in-house generated scrap metal. Natural gas flame torches are used on an in-frequent basis at various locations at the east end of the facility.

Natural gas is used to keep the torch lit and to heat the metal. Once the metal is hot, predominantly oxygen is used during cutting.

Manufacturer:	**Model number:**	**Serial number:**
SWVA		
Construction date:	**Installation date:**	**Modification date(s):**
06/01/1952	06/01/1952	06/01/1952

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
2.6 MMBtu/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
2.6 Mcf/hr	22 MMcf/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_Yes __ No	**If yes, is it?** ___ Indirect Fired _X_ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 2.6 MMBtu/hr	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Primary fuel is natural gas.
Maximum hourly fuel usage: 2.6 Mcf/hr
Maximum annual fuel usage: 22 MMcf/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	15 ppmv	Unknown	1020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.21	0.94
Nitrogen Oxides (NO_X)	0.25	1.12
Lead (Pb)	1.3E-06	5.58E-06
Particulate Matter ($PM_{2.5}$)	0.16	0.70
Particulate Matter (PM_{10})	0.16	0.70
Total Particulate Matter (TSP)	0.16	0.70
Sulfur Dioxide (SO_2)	0.002	0.007
Volatile Organic Compounds (VOC)	0.01	0.06
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
2-Methylnaphthalene	6.1E-08	2.68E-07
3-Methylchloranthrene	4.6E-09	2.01E-08
7,12-Dimethylbenz(a)anthracene	4.1E-08	1.79E-07
Acenaphthene	4.6E-09	2.01E-08
Acenaphthylene	4.6E-09	2.01E-08
Anthracene	6.1E-09	2.68E-08
Benz(a)anthracene	4.6E-09	2.01E-08
Benzene	5.4E-06	2.34E-05
Benzo(a)pyrene	3.1E-09	1.34E-08
Benzo(b)fluoranthene	4.6E-09	2.01E-08
Benzo(g,h,i)perylene	3.1E-09	1.34E-08
Benzo(k)fluoranthene	4.6E-09	2.01E-08
Chrysene	4.6E-09	2.01E-08
Dibenzo(a,h) anthracene	3.1E-09	1.34E-08
Dichlorobenzene	3.1E-06	1.34E-05
Fluoranthene	7.6E-09	3.35E-08
Fluorene	7.1E-09	3.13E-08
Formaldehyde	1.9E-04	8.37E-04
Hexane	4.6E-03	2.01E-02
Indo(1,2,3-cd)pyrene	4.6E-09	2.01E-08
Napthalene	1.6E-06	6.81E-06
Phenanthrene	4.3E-08	1.90E-07

Pyrene	1.3E-08	5.58E-08
Toluene	8.7E-06	3.80E-05
Arsenic	5.1E-07	2.23E-06
Beryllium	3.1E-08	1.34E-07
Cadmium	2.8E-06	1.23E-05
Chromium	3.6E-06	1.56E-05
Cobalt	2.1E-07	9.38E-07
Manganese	9.7E-07	4.24E-06
Mercury	6.6E-07	2.90E-06
Nickel	5.4E-06	2.34E-05
Selenium	6.1E-08	2.68E-07

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PM - AP-42 Table 12.5.1-1 (04/09)
Other Criteria Pollutants and HAPs - AP-42 Table 1.4-1, 1.4-2, 1.4-3, and 1.4-4 (07/98)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

NA

___ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

NA

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F.**

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU028	Plant Roads	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive emissions associated with SWVA owned vehicle operations on plant property.
Operations are predominantly near the Melt Shop (west end of the facility).

Manufacturer:	**Model number:**	**Serial number:**

Construction date:	**Installation date:**	**Modification date(s):**
06/01/1950	06/01/1950	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Process operations performed on an as needed basis.

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
3.2 mile/hr	28,000 mile/yr	8760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes _X_ No	**If yes, is it?** ___ Indirect Fired __ Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	0.22	0.96
Particulate Matter (PM_{10})	1.97	8.64
Total Particulate Matter (TSP)	7.59	33.25
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	NA	NA
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).
Plant data was used to determine vehicle characteristics and vehicle miles traveled.

Paved Roadways
Particle Size Multiplier for Paved Road Equation from AP-42 Chapter 13.2.1, Table 13.2-1.1 (1/11).
Typical Silt Loading Value for Iron and Steel Production Facilities from AP-42 Chapter 13.2.1, Table 13.2.1-3 (1/11).
Average Vehicle Weight represents the "fleet" average weight of all vehicles traveling the specified road segment, in accordance with calculation methodology specified for Equations 1 and 2 from AP-42, Chapter 13.2.1, Section 13.2.1.3 (1/11).
Total Loading Factor for Iron & Steel Production from AP-42 Chapter 13.2.1, Table 13.2.1-3 (1/11).
Annual Emission Factor calculated in accordance with Equation 2 of AP-42 Chapter 13.2.1 (1/11). E = [k (sL)0.91 * (W)1.02 * (1-P/4N), where N is the number of days in the period (per year in this case).

Unpaved Roadways
Particle Size Multiplier for Industrial Roads Equation 1a from AP-42 Chapter 13.2.2, Table 13.2.2-2 (11/06).
Mean Silt Content for Iron & Steel Production Plant Roads from AP-42 Chapter 13.2.2, Table 13.2.2-1 (11/06).
Average Vehicle Weight represents the "fleet" average weight of all vehicles traveling the specified road segment, in accordance with calculation methodology specified for Equation 1a from AP-42, Chapter 13.2.2, Section 13.2.2.2 (11/06).
Mean number of days with 0.01 inch or more of precipitation for Huntington, WV from AP-42 Chapter 13.2.2, Figure 13.2.2-1 (11/06).
Annual Emission Factor calculated in accordance with Equations 1a and 2 of AP-42 Chapter 13.2.2 (11/06). E = [k (s/12)a * (W/3)b] * [(365-P/365)], where a = 0.9 and b = 0.45 from Table 13.2.2-2.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Particulate matter emission control measures - [45CSR§7-5.2.]; Title V Permit Condition 3.1.10.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Recordkeeping:
Monitoring Information – [45 CSR §30-5.1.c.2.A.]; Title V Permit Condition 3.4.1.

Retention of Records for 5 years – [45 CSR §30-5.1.c.2.B.]; Title V Permit Condition 3.4.2

Reporting:
Semi-annual compliance reports - [40 CFR § 63.10685(c)(3) and 45CSR34]; Title V Permit Condition 4.5.2.

Annual emissions statement – [45 CSR §30-8.]; Title V Permit Condition 3.5.4.

Annual compliance certification – [45 CSR §30-5.3.e.]; Title V Permit Condition 3.5.5.

Semi-annual monitoring reports – [45 CSR §30-5.1.c.3.A.]; Title V Permit Condition 3.5.6.

Semi-annual deviation reporting – [45 CSR §30-4.3.h.1.B.]; Title V Permit Condition 3.5.8.

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F.**

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU029	Baghouse Dust Handling	NA

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive emissions from handling of dust collected in East Baghouse (CE006), Wheelabrator (Auxiliary) Baghouse (CE007), and West Baghouse (CE008). Minimal fugitive emissions occur as a result of routine sweeping and housekeeping activities, as well as from transferring dust from storage silos into trucks for off-site transport.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
NA	NA	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
NA

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
	~16,000 tons of dust	8,760 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes __X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	NA	NA	
Nitrogen Oxides (NO_X)	NA	NA	
Lead (Pb)	3.30E-03	1.45E-02	
Particulate Matter ($PM_{2.5}$)	0.01	0.05	
Particulate Matter (PM_{10})	0.07	0.32	
Total Particulate Matter (TSP)	0.15	0.67	
Sulfur Dioxide (SO_2)	NA	NA	
Volatile Organic Compounds (VOC)	NA	NA	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Arsenic (As)	7.63E-07	3.34E-06	
Beryllium (Be)	NA	NA	
Cadmium (Ca)	1.10E-04	4.82E-04	
Chromium (Cr)	2.30E-04	1.01E-03	
Fluoride (F)	NA	NA	
Mercury (Hg)	7.94E-06	3.48E-05	
Manganese (Mn)	5.76E-03	2.52E-02	
Nickel (Ni)	3.00E-05	1.32E-04	
Zinc (Zn)	4.34E-02	1.90E-01	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

PM – AP-42, Section 13.2.4 (11/06)
HAPs – Dust analysis

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

NA

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

NA

Are you in compliance with all applicable requirements for this emission unit? ___Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F.**

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU030	Alloy Handling	NA

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Fugitive emissions from handling of alloy material. Minimal fugitive emissions occur as a result of routine sweeping and housekeeping activities, as well as from manual transfer of alloys into the EAFs.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
NA	NA	

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
NA

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
	~9,000 tons of alloy	8,760 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	0.06	0.27
Particulate Matter (PM_{10})	0.06	0.27
Total Particulate Matter (TSP)	0.12	0.54
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	NA	NA
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Section 11.24-2 (01/95)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

NA

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

NA

Are you in compliance with all applicable requirements for this emission unit? ___Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU031	East Cooling Towers	NA

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Emissions from two (2) East Cooling towers, with a combined recirculation rate of 700 gallons per minute.

Manufacturer:	**Model number:**	**Serial number:**
Construction date: 06/2000	**Installation date:**	**Modification date(s):**

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Recirculation Rate 1,800 gpm

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
108,000 gph	946 MM gpy	8760 hours

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X__ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	0.42	1.83
Particulate Matter (PM_{10})	0.42	1.83
Total Particulate Matter (TSP)	0.42	1.83
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	NA	NA
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 Table 13.4-1 (09/95)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

NA

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

NA

Are you in compliance with all applicable requirements for this emission unit? _X__Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F.**

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU032	Melt Shop Cooling Towers	NA

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Emissions from three (3) Melt Shop Cooling towers, with a combined recirculation rate of 1,400 gallons per minute.

Manufacturer:	**Model number:**	**Serial number:**

Construction date:	**Installation date:**	**Modification date(s):**
02/1999		11/2010

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Recirculation Rate 5,273 gpm

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
316,380 gph	2,771 MMgpy	8760 hours

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes ___ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	1.22	5.36
Particulate Matter (PM_{10})	1.22	5.36
Total Particulate Matter (TSP)	1.22	5.36
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	NA	NA
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 Table 13.4-1 (09/95)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

NA

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

NA

Are you in compliance with all applicable requirements for this emission unit? _X__Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU033	Space Heaters	NA

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Natural gas-fired space heaters with a combined rating of 5 MMBtu/hr.

Manufacturer:	**Model number:**	**Serial number:**

Construction date:	**Installation date:**	**Modification date(s):**
1982		

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
5 MMBtu/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
4.9 Mscf/hr	42.9 MMscf/yr	8760

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X__Yes ___ No	**If yes, is it?** ___ Indirect Fired _X__Direct Fired
Maximum design heat input and/or maximum horsepower rating: 5 MMBtu/hr	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Primary fuel type is natural gas.
Maximum hourly fuel usage: 4.9 Mscf/hr
Maximum annual fuel usage: 42.9 MMscf/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural gas	15 ppmv	Unknown	1020 BTU/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.41	1.80
Nitrogen Oxides (NO_X)	0.49	2.15
Lead (Pb)	2.5E-06	1.07E-05
Particulate Matter ($PM_{2.5}$)	0.04	0.16
Particulate Matter (PM_{10})	0.04	0.16
Total Particulate Matter (TSP)	0.04	0.16
Sulfur Dioxide (SO_2)	0.00	0.01
Volatile Organic Compounds (VOC)	0.03	0.12
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
2-Methylnaphthalene	1.2E-07	5.15E-07
3-Methylchloranthrene	8.8E-09	3.86E-08
7,12-Dimethylbenz(a)anthracene	7.8E-08	3.44E-07
Acenaphthene	8.8E-09	3.86E-08
Acenaphthylene	8.8E-09	3.86E-08
Anthracene	1.2E-08	5.15E-08
Benz(a)anthracene	8.8E-09	3.86E-08
Benzene	1.0E-05	4.51E-05
Benzo(a)pyrene	5.9E-09	2.58E-08
Benzo(b)fluoranthene	8.8E-09	3.86E-08
Benzo(g,h,i)perylene	5.9E-09	2.58E-08
Benzo(k)fluoranthene	8.8E-09	3.86E-08
Chrysene	8.8E-09	3.86E-08
Dibenzo(a,h) anthracene	5.9E-09	2.58E-08
Dichlorobenzene	5.9E-06	2.58E-05
Fluoranthene	1.5E-08	6.44E-08
Fluorene	1.4E-08	6.01E-08
Formaldehyde	3.7E-04	1.61E-03
Hexane	8.8E-03	3.86E-02
Indo(1,2,3-cd)pyrene	8.8E-09	3.86E-08
Napthalene	3.0E-06	1.31E-05
Phenanthrene	8.3E-08	3.65E-07
Pyrene	2.5E-08	1.07E-07
Toluene	1.7E-05	7.30E-05

Arsenic	9.8E-07	4.29E-06
Beryllium	5.9E-08	2.58E-07
Cadmium	5.4E-06	2.36E-05
Chromium	6.9E-06	3.01E-05
Cobalt	4.1E-07	1.80E-06
Manganese	1.9E-06	8.16E-06
Mercury	1.3E-06	5.58E-06
Nickel	1.0E-05	4.51E-05
Selenium	1.2E-07	5.15E-07

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4 (07/98).

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

NA

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

NA

Are you in compliance with all applicable requirements for this emission unit? ___Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F.**

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU034	Emergency Generator #1, diesel-fired	NA

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
97 HP diesel-fired emergency generator engine

Manufacturer:	**Model number:**	**Serial number:**
Harper Detroit Diesel Limited	LJ70296	U719531A
Construction date: 1996	**Installation date:** 1996	**Modification date(s):** N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
97 HP

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
.92 gal/hr	2,460 gal/year	500

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X__Yes ___ No	**If yes, is it?** ___ Indirect Fired _X__Direct Fired
Maximum design heat input and/or maximum horsepower rating: 97 HP	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Primary fuel type is diesel.
Maximum hourly fuel usage: 4.92 gal/hr
Maximum annual fuel usage: 2,460 gal/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel	15 ppmv	Unknown	137 BTU/1000 gal

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.65	0.16
Nitrogen Oxides (NO_X)	2.99	0.75
Lead (Pb)	0	0
Particulate Matter ($PM_{2.5}$)	0.84	2.10E-01
Particulate Matter (PM_{10})	0.84	2.10E-01
Total Particulate Matter (TSP)	0.84	2.10E-01
Sulfur Dioxide (SO_2)	0.20	0.05
Volatile Organic Compounds (VOC)	0.24	0.06
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	6.34E-04	1.58E-04
Toluene	2.78E-04	6.94E-05
Xylenes	1.94E-04	4.84E-05
Propylene	1.75E-03	4.38E-04
1,3-Butadiene	2.65E-05	6.64E-06
Formaldehyde	8.01E-04	2.00E-04
Acetaldehyde	5.21E-04	1.30E-04
Acrolein	6.28E-05	1.57E-05
Naphthalene	5.76E-05	1.44E-05
Acenaphthylene	3.44E-06	8.59E-07
Acenaphthene	9.64E-07	2.41E-07
Fluorene	1.98E-05	4.96E-06
Phenanthrene	2.00E-05	4.99E-06
Anthracene	1.27E-06	3.17E-07
Fluoranthene	5.17E-06	1.29E-06
Pyrene	3.25E-06	8.11E-07
Benzo(a)anthracene	1.14E-06	2.85E-07
Chrysene	2.40E-07	5.99E-08
Benzo(b)fluoranthene	6.73E-08	1.68E-08
Benzo(k)fluoranthene	1.05E-07	2.63E-08
Benzo(a)pyrene	1.28E-07	3.19E-08
Indeno(1,2,3-cd)pyrene	2.55E-07	6.37E-08
Dibenz(a,h)anthracene	3.96E-07	9.90E-08
Benzo(g,h,l)perylene	3.32E-07	8.30E-08

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42, Tables 3.3-1 and 3.3.-2 (10/96).

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Work practice requirements – 45CSR34, 40 CFR §63.6603(a) and Table 2d(4) and footnote 2 to Table 2d and Title V Permit Condition 7.1.1.

General duty to minimize air pollution - 45CSR34, 40 CFR §63.6605 and Title V Permit Condition 7.1.2.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Install non-resettable hour meter - 45CSR34, 40 CFR §§63.6625(e), (f), (h), and (i) and Title V Permit Condition 7.2.1.

Deviation reporting and operating hour limitations - 45CSR34, 40 CFR §§ 63.6640(a), (b), (f)(1), (2), and (4), and Table 6(9) and Title V Permit Condition 7.2.2.

Recordkeeping - 45CSR34, 40 CFR §§ 63.6655(a), (e), and (f)(2) and Title V Permit Condition 7.4.1.; 45CSR34, 40 CFR § 63.6660 and Title V Permit Condition 7.4.2.

Are you in compliance with all applicable requirements for this emission unit? __X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU035	Emergency Generator #2, natural gas-fired	NA

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
254.3 HP natural gas-fired engine

Manufacturer:	**Model number:**	**Serial number:**
Generac	GP680 AA	E172A 161008 2900129

Construction date:	**Installation date:**	**Modification date(s):**
2010	2010	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
254.3 HP

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1.78 MMBtu/hr	890.05 MMBtu/yr	500

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X__Yes ___ No	**If yes, is it?** ___ Indirect Fired _X__Direct Fired
Maximum design heat input and/or maximum horsepower rating: 254.3 HP	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Primary fuel type is natural gas.
Maximum hourly fuel usage: 1.75 Mscf/hr
Maximum annual fuel usage: 0.87 MMscf/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural gas	15 ppmv	Unknown	1020 BTU/scf

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	6.62	1.66
Nitrogen Oxides (NO_X)	3.93	0.98
Lead (Pb)	0	0
Particulate Matter ($PM_{2.5}$)	0.03	0.01
Particulate Matter (PM_{10})	0.03	0.01
Total Particulate Matter (TSP)	0.03	0.01
Sulfur Dioxide (SO_2)	0.001	2.62E-04
Volatile Organic Compounds (VOC)	0.05	0.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
1,1,2,2-Tetrachloroethane	4.50E-05	1.13E-05
1,1,2-Trichloroethane	2.72E-05	6.81E-06
1,3-Butadiene	1.18E-03	2.95E-04
1,3-Dichloropropene	2.26E-05	5.65E-06
Acetaldehyde	4.97E-03	1.24E-03
Acrolein	4.68E-03	1.17E-03
Benzene	2.81E-03	7.03E-04
Carbon Tetrachloride	3.15E-05	7.88E-06
Chlorobenzene	2.30E-05	5.74E-06
Chloroform	2.44E-05	6.10E-06
Ethylbenzene	4.41E-05	1.10E-05
Ethylene Dibromide	3.79E-05	9.48E-06
Formaldehyde	3.65E-02	9.12E-03
Methanol	5.45E-03	1.36E-03
Methylene Chloride	7.33E-05	1.83E-05
Napthalene	1.73E-04	4.32E-05
PAH	2.51E-04	6.27E-05
Styrene	2.12E-05	5.30E-06
Toluene	9.93E-04	2.48E-04
Vinyl Chloride	1.28E-05	3.20E-06
Xylene	3.47E-04	8.68E-05
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). AP-42, Table 3.2-3 (7/00)		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Emission standards or certification - 40CFR§60.4233(e) and Table 1, 45CSR16, 40CFR§60.4234, 45CSR16, 40CFR§60.4237(b), 45CSR16, and Title V Permit Conditions 7.1.3, 7.1.4., and 7.1.5.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Purchase certified engine or conduct initial performance test and develop maintenance plan - 40CFR§§60.4243(b), (b)(1), (b)(2), and (b)(2)(i), 45CSR16 and Title V Permit Condition 7.2.3.

Operating hours limitations - 40CFR§60.4243(d), 45CSR16 and Title V Permit Condition 7.2.4.

Alternative fuel requirements - 40CFR§60.4243(e), 45CSR16 and Title V Permit Condition 7.2.5.

Air-to-fuel ratio controller - 40CFR§60.4243(g), 45CSR16 and Title V Permit Condition 7.2.6.

Are you in compliance with all applicable requirements for this emission unit? __X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EU036	Emergency Generator #3, natural gas-fired	NA

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
268 HP natural gas-fired engine

Manufacturer:	**Model number:**	**Serial number:**
PSI Industrial	D111L	EEIOH201846

Construction date:	**Installation date:**	**Modification date(s):**
2013	2013	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
268 HP

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1.88 MMBtu/hr	938.00 MMBtu/yr	500

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X__Yes ___ No	**If yes, is it?** ___ Indirect Fired _X__Direct Fired
Maximum design heat input and/or maximum horsepower rating: 268 HP	**Type and Btu/hr rating of burners:**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Primary fuel type is natural gas.
Maximum hourly fuel usage: 1.84 Mscf/hr
Maximum annual fuel usage: 0.92 MMscf/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural gas	15 ppmv	Unknown	1020 BTU/scf

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	6.62	1.66
Nitrogen Oxides (NO_X)	3.93	0.98
Lead (Pb)	0	0
Particulate Matter ($PM_{2.5}$)	0.02	4.23E-03
Particulate Matter (PM_{10})	0.02	4.23E-03
Total Particulate Matter (TSP)	0.02	4.23E-03
Sulfur Dioxide (SO_2)	0.001	2.62E-04
Volatile Organic Compounds (VOC)	0.05	0.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
1,1,2,2-Tetrachloroethane	4.50E-05	1.13E-05
1,1,2-Trichloroethane	2.72E-05	6.81E-06
1,3-Butadiene	1.18E-03	2.95E-04
1,3-Dichloropropene	2.26E-05	5.65E-06
Acetaldehyde	4.97E-03	1.24E-03
Acrolein	4.68E-03	1.17E-03
Benzene	2.81E-03	7.03E-04
Carbon Tetrachloride	3.15E-05	7.88E-06
Chlorobenzene	2.30E-05	5.74E-06
Chloroform	2.44E-05	6.10E-06
Ethylbenzene	4.41E-05	1.10E-05
Ethylene Dibromide	3.79E-05	9.48E-06
Formaldehyde	3.65E-02	9.12E-03
Methanol	5.45E-03	1.36E-03
Methylene Chloride	7.33E-05	1.83E-05
Napthalene	1.73E-04	4.32E-05
PAH	2.51E-04	6.27E-05
Styrene	2.12E-05	5.30E-06
Toluene	9.93E-04	2.48E-04
Vinyl Chloride	1.28E-05	3.20E-06
Xylene	3.47E-04	8.68E-05
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). AP-42, Table 3.2-3 (7/00)		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Emission standards or certification - 40CFR§60.4233(e) and Table 1, 45CSR16, 40CFR§60.4234, 45CSR16, 40CFR§60.4237(b), 45CSR16, and Title V Permit Conditions 7.1.3, 7.1.4., and 7.1.5.

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Purchase certified engine or conduct initial performance test and develop maintenance plan - 40CFR§§60.4243(b), (b)(1), (b)(2), and (b)(2)(i), 45CSR16 and Title V Permit Condition 7.2.3.

Operating hours limitations - 40CFR§60.4243(d), 45CSR16 and Title V Permit Condition 7.2.4.

Alternative fuel requirements - 40CFR§60.4243(e), 45CSR16 and Title V Permit Condition 7.2.5.

Air-to-fuel ratio controller - 40CFR§60.4243(g), 45CSR16 and Title V Permit Condition 7.2.6.

Are you in compliance with all applicable requirements for this emission unit? __X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT F – SCHEDULE OF COMPLIANCE FORM

Not Applicable

ATTACHMENT F - Schedule of Compliance Form	
Complete this section if you indicated noncompliance with any of the applicable requirements identified in the permit application. For each emission unit which is not in compliance, identify the applicable requirement, the reason(s) for noncompliance, a description of how the source will achieve compliance, and a detailed schedule of compliance. If there is a consent order that applies to this requirement, attach a copy to this form.	
1. Applicable Requirement N/A	
Unit(s):	**Applicable Requirement:**
2. Reason for Noncompliance:	
3. How will Compliance be Achieved?	
4. Consent Order Number (if applicable):	
5. **Schedule of Compliance.** Provide a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance, including a date for final compliance.	
Remedial Measure or Action	Date to be Achieved
6. Submittal of Progress Reports.	
Content of Progress Report:	**Report starting date:** _____ MM/DD/YYYY **Submittal frequency:**

ATTACHMENT G – AIR POLLUTION CONTROL DEVICE FORMS

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: CE005	**List all emission units associated with this control device.** Primary - EU005A, EU011, EU012, EU013, EU009 Secondary – EU006, EU007	
Manufacturer: NA	**Model number:** NA	**Installation date:**

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	_X_ Other (describe) _Building_____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	100%	70%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

CE005 is the Melt Shop/Caster Building which serves as a primary control device for Ladle Preheaters, Ladle Refurbishing, Slag Handling, Continuous Caster, and Caster Cutoff Torches. CE005 provides secondary control to Electric Arc Furnaces #1 and #2.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X__ No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** CAM was addressed in 2009 permit renewal.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: CE006	**List all emission units associated with this control device.** EU007, EU008, EU003 (fugitive only)	
Manufacturer:	**Model number:**	**Installation date:**

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	99%	99%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

CE006 is the East Baghouse, located in the Melt Shop, which serves as a control device for the Melt Shop Canopy Hood (EU008) and Electric Arc Furnace #2 (EU007).

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X__ No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** CAM was addressed in 2009 permit renewal.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: CE007	**List all emission units associated with this control device.** EU008, EU010, EU003 (fugitive only)	
Manufacturer:	**Model number:**	**Installation date:**

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	99%	99%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

CE007 is the Wheelabrator Baghouse, located in the Melt Shop, which serves as a control device for the Melt Shop Canopy Hood (EU008) and Tundish Cleaning and Refurbishing (EU010).

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X__ No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** CAM was addressed in 2009 permit renewal.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: CE008	**List all emission units associated with this control device.** EU006, EU008, EU003 (fugitive only)	
Manufacturer:	**Model number:**	**Installation date:**

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	99%	99%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

CE007 is the West Baghouse, located in the Melt Shop, which serves as the control device for Electric Arc Furnace #1 (EU006), Lime Bin #1 Load-In (EU003), and the Melt Shop Canopy Hood (EU008).

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X__ No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** CAM was addressed in 2009 permit renewal.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: CE015 #1 Mill Building	**List all emission units associated with this control device.** EU015	
Manufacturer:	**Model number:**	**Installation date:**

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare __X_ Other (describe) Building_____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

CE015 is the #1 Mill Building which serves as a primary control device for Hot Rolling Mill #1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X__ No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** CAM was addressed in 2009 permit renewal.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: CE017 #2 Mill Building	**List all emission units associated with this control device.** EU017	
Manufacturer:	**Model number:**	**Installation date:**

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare _X_ Other (describe) Building_____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

CE017 is the #2 Mill Building which serves as a primary control device for Hot Rolling Mill #2.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X__ No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** CAM was addressed in 2009 permit renewal.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: CE024 Shotblast Baghouse	**List all emission units associated with this control device.** EU024	
Manufacturer:	**Model number:**	**Installation date:**

Type of Air Pollution Control Device:

_X__ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate matter	99%	99%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

CE024 is the Shotblast Baghouse which serves as the primary control device for the Shot Blaster.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X__ No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** CAM was addressed in 2009 permit renewal.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

ATTACHMENT H – CAM PLAN FORM

Not Applicable

ATTACHMENT H - Compliance Assurance Monitoring (CAM) Plan Form

For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at http://www.epa.gov/ttn/emc/cam.html

CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to **EACH** regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet **all** of the following criteria (*If No, then the remainder of this form need not be completed*): ☐ YES ☑ NO

a. The PSEU is located at a major source that is required to obtain a Title V permit;

b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is NOT exempt;

LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
- Stratospheric Ozone Protection Requirements.
- Acid Rain Program Requirements.
- Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
- An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).

c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;

d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND

e. The PSEU is NOT an exempt backup utility power emissions unit that is municipally-owned.

BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit:

☐ RENEWAL APPLICATION. **ALL** PSEUs for which a CAM plan has NOT yet been approved need to be addressed in this CAM plan submittal.

CAM previously addressed/approved

☐ INITIAL APPLICATION (submitted after 4/20/98). **ONLY** large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.

☐ SIGNIFICANT MODIFICATION TO LARGE PSEUs. **ONLY** large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, Only address the appropriate monitoring requirements affected by the significant modification.

ATTACHMENT I – FACILITY-WIDE PTE CALCULATION

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Descrip Title V Operating Permit Renewal
Date: 5/1/2020

Table 1. Potential to Emit - Criteria Pollutants

Emission Point ID	Emission Unit ID	Emission Unit Description	Potential Emissions (tpy)							
			PM-FIL	PM10-FIL	PM2.5-FIL	PM-CON	NO_x	VOC	SO_2	CO
F001	EU001	Scrap Preparation Torches	0.63	0.63	0.63	0.01	0.21	0.01	0.001	0.18
S008/F003	EU003	Lime Bin #1 Load-In	0.87	0.81	0.76	NA	NA	NA	NA	NA
F005A	EU005A	Ladle Preheaters (4)	0.18	0.18	0.18	0.54	9.45	0.52	0.06	7.94
S008/F005	EU006	West Baghouse (CE008)	7.67	5.83	5.67	3.42	19.27	2.01	17.52	157.68
S008/S006	EU008	Wheelabrator Baghouse (CE007)	4.56	3.46	3.37	6.83	NA	NA	NA	NA
S007/F005	EU007	East Baghouse (CE006)	7.58	5.76	5.61	3.42	19.27	2.01	17.52	157.68
F005	---	Melt Shop Fugitives	11.56	8.79	8.56	3.99	NA	NA	NA	NA
F005	EU009	Ladle Refurbishing	1.2E-03	5.8E-04	8.7E-05	NA	NA	NA	NA	NA
S007/F005	EU010	Tundish Cleaning/Refurbishing	0.04	0.03	0.03	0.07	1.29	0.07	0.01	1.08
F005	EU011	Slag Handling	4.56	2.28	0.81	NA	NA	NA	NA	NA
F005	EU012	Continuous Caster	6.31	4.79	4.67	0.65	NA	NA	NA	NA
F005	EU013	Caster Cutoff Torches	5.61	5.61	5.61	0.00	0.09	0.00	0.001	0.07
S014	EU014	#1 Reheat Furnace	0.61	0.61	0.61	1.63	79.89	0.13	0.25	0.55
F015	EU015	Hot Rolling Mill #1	3.36	3.36	3.36	NA	NA	NA	NA	NA
S016	EU016	#2 Reheat Furnace	1.99	1.99	1.99	5.30	108.19	0.17	0.33	0.74
F017	EU017	Hot Rolling Mill #2	3.09	3.09	3.09	NA	NA	NA	NA	NA
F020	EU020	Paint Application	NA	NA	NA	NA	NA	2.50	NA	NA
S021	EU021	Paint Drying Oven	0.03	0.03	0.03	0.10	1.72	0.09	0.010	1.44
S022	EU022	Continuous Wax Line Heater	0.03	0.03	0.03	0.10	1.72	0.09	0.01	1.44
F023	EU023	Wax Application	NA	NA	NA	NA	NA	14.38	NA	NA
S024	EU024	Shot Blaster; Blast Cleaning Products	2.150	2.150	2.150	NA	NA	NA	NA	NA
F025	EU025	Welding	1.37	1.37	1.37	NA	NA	NA	NA	NA
F026	EU026	Cold Cleaner	NA	NA	NA	NA	NA	8.99	NA	NA
F027	EU027	Scrap Cutup Torches	0.63	0.63	0.63	0.06	1.12	0.06	0.01	0.94
F028	EU028	Roadways	33.25	8.64	0.96	NA	NA	NA	NA	NA
F029	EU029	Baghouse Dust Handling	0.67	0.32	0.05	NA	NA	NA	NA	NA
F030	EU030	Alloy Handling	0.54	0.27	0.27	NA	NA	NA	NA	NA
S031	EU031	East Cooling Towers	1.83	1.83	1.83	NA	NA	NA	NA	NA
S032	EU032	Melt Shop Cooling Towers	5.36	5.36	5.36	NA	NA	NA	NA	NA
S033	EU033	Space Heaters	0.04	0.04	0.04	0.12	2.15	0.12	0.013	1.80
S034	EU034	Emergency Generator #1, diesel-fired	0.05	0.05	0.05	0.16	0.75	0.06	0.05	0.16
S035	EU035	Emergency Generator #2; natural gas-fired	4.23E-03	4.23E-03	4.23E-03	4.41E-03	0.98	0.01	2.62E-04	1.66
S036	EU036	Emergency Generator #3; natural gas-fired	4.46E-03	4.46E-03	4.46E-03	4.65E-03	1.04	0.01	2.76E-04	1.74
Total	**PTE**		**104.59**	**67.96**	**57.74**	**26.41**	**247.12**	**31.26**	**35.78**	**335.11**

1. Lime Bin #2 (EU004, S007/F004) has been removed and emissions are not included in the table above.

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Table 2. Potential to Emit - HAP (tpy)[1]

Pollutant	CAS Number	EU001 Scrap Preparation Torches	EU003 Lime Bin #1 Load-In	EU005A Ladle Preheaters (4)	EU006 EAF #1	EU007 EAF #2	EU008 EAF Canopy Hood	Melt Shop Fugitives	EU009 Ladle Refurbishing	EU010 Tundish Cleaning/Refurbishing	EU011 Slag Handling	EU012 Continuous Caster	EU013 Caster Cutoff Torches	EU014 #1 Reheat Furnace	EU015 Hot Rolling Mill #1	EU016 #2 Reheat Furnace	EU017 Hot Rolling Mill #2	EU020 Paint Application
Speciated Organics																		
1,1,2,2-Tetrachloroethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Butadiene	106-99-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichloropropene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene[2]	91-57-6	5.15E-08	NA	2.27E-06	NA	NA	NA	NA	NA	3.09E-07	NA	NA	2.06E-08	9.89E-06	NA	1.34E-05	NA	NA
2-Propoxyethanol (Propyl Cellosolve)	2807-30-09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylchloranthrene[2]	56-49-5	3.86E-09	NA	1.70E-07	NA	NA	NA	NA	NA	2.32E-08	NA	NA	1.55E-09	7.42E-07	NA	1.00E-06	NA	NA
7,12-Dimethylbenz(a)anthracene[2]	57-97-6	3.44E-08	NA	1.51E-06	NA	NA	NA	NA	NA	2.06E-07	NA	NA	1.37E-08	6.60E-06	NA	8.93E-06	NA	NA
Acenaphthene[2]	83-32-9	3.86E-09	NA	1.70E-07	NA	NA	NA	NA	NA	2.32E-08	NA	NA	1.55E-09	7.42E-07	NA	1.00E-06	NA	NA
Acenaphthylene[2]	208-96-8	3.86E-09	NA	1.70E-07	NA	NA	NA	NA	NA	2.32E-08	NA	NA	1.55E-09	7.42E-07	NA	1.00E-06	NA	NA
Acetaldehyde	75-07-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acrolein	107-02-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene[2]	120-12-7	5.15E-09	NA	2.27E-07	NA	NA	NA	NA	NA	3.09E-08	NA	NA	2.06E-09	9.89E-07	NA	1.34E-06	NA	NA
Benz(a)anthracene[2]	56-55-3	3.86E-09	NA	1.70E-07	NA	NA	NA	NA	NA	2.32E-08	NA	NA	1.55E-09	7.42E-07	NA	1.00E-06	NA	NA
Benzene	71-43-2	4.51E-06	NA	1.98E-04	NA	NA	NA	NA	NA	2.71E-05	NA	NA	1.80E-06	8.66E-04	NA	1.17E-03	NA	NA
Benzo(a)pyrene[2]	50-32-8	2.58E-09	NA	1.13E-07	NA	NA	NA	NA	NA	1.55E-08	NA	NA	1.03E-09	4.95E-07	NA	6.70E-07	NA	NA
Benzo(b)fluoranthene[2]	205-99-2	3.86E-09	NA	1.70E-07	NA	NA	NA	NA	NA	2.32E-08	NA	NA	1.55E-09	7.42E-07	NA	1.00E-06	NA	NA
Benzo(g,h,i)perylene[2]	191-24-2	2.58E-09	NA	1.13E-07	NA	NA	NA	NA	NA	1.55E-08	NA	NA	1.03E-09	4.95E-07	NA	6.70E-07	NA	NA
Benzo(j)fluoranthene[2]	205-82-3	3.86E-09	NA	1.70E-07	NA	NA	NA	NA	NA	2.32E-08	NA	NA	1.55E-09	7.42E-07	NA	1.00E-06	NA	NA
Carbon Tetrachloride		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene[2]	218-01-9	3.86E-09	NA	1.70E-07	NA	NA	NA	NA	NA	2.32E-08	NA	NA	1.55E-09	7.42E-07	NA	1.00E-06	NA	NA
Dibenzo(a,h) anthracene[2]	53-70-3	2.58E-09	NA	1.13E-07	NA	NA	NA	NA	NA	1.55E-08	NA	NA	1.03E-09	4.95E-07	NA	6.70E-07	NA	NA
Dichlorobenzene	25321-22-6	2.58E-06	NA	1.13E-04	NA	NA	NA	NA	NA	1.55E-05	NA	NA	1.03E-06	4.95E-04	NA	6.70E-04	NA	NA
Ethylbenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylene Dibromide		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene[2]	206-44-0	6.44E-09	NA	2.83E-07	NA	NA	NA	NA	NA	3.86E-08	NA	NA	2.58E-09	1.24E-06	NA	1.67E-06	NA	NA
Fluorene[2]	86-73-7	6.01E-09	NA	2.65E-07	NA	NA	NA	NA	NA	3.61E-08	NA	NA	2.40E-09	1.15E-06	NA	1.56E-06	NA	NA
Formaldehyde	50-00-0	1.61E-04	NA	7.09E-03	NA	NA	NA	NA	NA	9.66E-04	NA	NA	6.44E-05	3.09E-02	NA	4.19E-02	NA	NA
Hexane	110-54-3	3.86E-03	NA	1.70E-01	NA	NA	NA	NA	NA	2.32E-02	NA	NA	1.55E-03	7.42E-01	NA	1.00E+00	NA	NA
Indo(1,2,3-cd)pyrene[2]	193-39-5	3.86E-09	NA	1.70E-07	NA	NA	NA	NA	NA	2.32E-08	NA	NA	1.55E-09	7.42E-07	NA	1.00E-06	NA	NA
Methanol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Napthalene	91-20-3	1.31E-06	NA	5.76E-05	NA	NA	NA	NA	NA	7.86E-06	NA	NA	5.24E-07	2.51E-04	NA	3.41E-04	NA	NA
Phenanthrene[2]	85-01-8	3.65E-08	NA	1.61E-06	NA	NA	NA	NA	NA	2.19E-07	NA	NA	1.46E-08	7.01E-06	NA	9.49E-06	NA	NA
Propylene	115-07-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene[2]	129-00-0	1.07E-08	NA	4.72E-07	NA	NA	NA	NA	NA	6.44E-08	NA	NA	4.29E-09	2.06E-06	NA	2.79E-06	NA	NA
Styrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	127-18-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	7.30E-06	NA	3.21E-04	NA	NA	NA	NA	NA	4.38E-05	NA	NA	2.92E-06	1.40E-03	NA	1.90E-03	NA	NA
Vinyl Chloride		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene	1130-20-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HAP Metals																		
Arsenic	7440-38-2	4.29E-07	NA	1.89E-05	3.83E-05	3.79E-05	2.28E-05	5.78E-05	NA	2.58E-06	NA	NA	1.72E-07	8.24E-05	NA	1.12E-04	NA	NA
Beryllium	7440-41-7	2.58E-08	NA	1.13E-06	2.45E-05	2.45E-05	NA	NA	NA	1.55E-07	NA	NA	1.03E-08	4.95E-06	NA	6.70E-06	NA	NA
Cadmium	7440-43-9	2.36E-06	NA	1.04E-04	9.81E-03	9.70E-03	5.83E-03	1.48E-02	NA	1.42E-05	NA	NA	9.45E-07	4.53E-04	NA	6.14E-04	NA	NA
Chromium	7440-47-3	3.01E-06	NA	1.32E-04	1.82E-02	1.80E-02	1.08E-02	2.75E-02	NA	1.80E-05	NA	NA	1.20E-06	5.77E-04	NA	7.82E-04	NA	NA
Cobalt	7440-48-4	1.80E-07	NA	7.94E-06	NA	NA	NA	NA	NA	1.08E-06	NA	NA	7.21E-08	3.46E-05	NA	4.69E-05	NA	NA
Lead	7439-92-1	1.07E-06	NA	4.72E-05	1.22E-01	1.21E-01	7.25E-02	1.84E-01	NA	6.44E-06	NA	NA	4.29E-07	2.06E-04	NA	2.79E-04	NA	NA
Manganese	7439-96-5	8.16E-07	NA	3.59E-05	3.74E-01	3.70E-01	2.22E-01	5.65E-01	NA	4.90E-06	NA	NA	3.26E-07	1.57E-04	NA	2.12E-04	NA	NA
Mercury	7439-97-6	5.58E-07	NA	2.46E-05	1.53E-06	1.52E-06	9.11E-07	2.31E-06	NA	3.35E-06	NA	NA	2.23E-07	1.07E-04	NA	1.45E-04	NA	NA
Nickel	7440-02-0	4.51E-06	NA	1.98E-04	1.84E-03	1.82E-03	1.09E-03	2.78E-03	NA	2.71E-05	NA	NA	1.80E-06	8.66E-04	NA	1.17E-03	NA	NA
Selenium	7782-49-2	5.15E-08	NA	2.27E-06	NA	NA	NA	NA	NA	3.09E-07	NA	NA	2.06E-08	9.89E-06	NA	1.34E-05	NA	NA
Total POM[2]		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total Metal HAP		**0.00**	**0.00**	**0.00**	**0.53**	**0.52**	**0.31**	**0.79**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total HAP		**0.00**	**0.00**	**0.18**	**0.53**	**0.52**	**0.31**	**0.79**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.78**	**0.00**	**1.05**	**0.00**	**0.00**

1. HAPs to be included in the Emissions Inventory as follows:
   Metals and polycyclic organic matter (POM) report on a process unit basis regardless of emission rate.
   All other HAPs - report emissions of that HAP for all emissions units if facility wide emissions are 0.1 tpy or greater
2. Compound is a POM as specified by footnote c on Table 1.4-3 AP-42 Section 1.4, dated 7/98.

Client Name:
Facility Name:
Project Description:
Date:

Table 2. Potential to Emit - HAP (tpy)[1]

Pollutant	EU021 Paint Drying Oven	EU022 Continuous Wax Line Heater	EU023 Wax Application	EU024 Shot Blaster; Blast Cleaning Products	EU025 Welding	EU026 Cold Cleaner	EU027 Scrap Cutup Torches	EU028 Roadways	EU029 Baghouse Dust Handling	EU030 Alloy Handling	EU031 East Cooling Towers	EU032 Melt Shop Cooling Towers	EU033 Space Heaters	EU034 Emergency Generator #1	EU035 Emergency Generator #2	EU036 Emergency Generator #3	Total Individual HAP
Speciated Organics																	
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.13E-05	1.19E-05	**2.31E-05**
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.81E-06	7.18E-06	**1.40E-05**
1,3-Butadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.64E-06	2.95E-04	3.11E-04	**6.13E-04**
1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.65E-06	5.96E-06	**1.16E-05**
2-Methylnaphthalene[2]	4.12E-07	4.12E-07	NA	NA	NA	NA	2.68E-07	NA	NA	NA	NA	NA	5.15E-07	NA	NA	NA	**2.75E-05**
2-Propoxyethanol (Propyl Cellosolve)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.00E+00**
3-Methylchloranthrene[2]	3.09E-08	3.09E-08	NA	NA	NA	NA	2.01E-08	NA	NA	NA	NA	NA	3.86E-08	NA	NA	NA	**2.07E-06**
7,12-Dimethylbenz(a)anthracene[2]	2.75E-07	2.75E-07	NA	NA	NA	NA	1.79E-07	NA	NA	NA	NA	NA	3.44E-07	NA	NA	NA	**1.84E-05**
Acenaphthene[2]	3.09E-08	3.09E-08	NA	NA	NA	NA	2.01E-08	NA	NA	NA	NA	NA	3.86E-08	8.59E-07	NA	NA	**2.93E-06**
Acenaphthylene[2]	3.09E-08	3.09E-08	NA	NA	NA	NA	2.01E-08	NA	NA	NA	NA	NA	3.86E-08	2.41E-07	NA	NA	**2.31E-06**
Acetaldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.30E-04	1.24E-03	1.31E-03	**2.68E-03**
Acrolein	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.57E-05	1.17E-03	1.23E-03	**2.42E-03**
Anthracene[2]	4.12E-08	4.12E-08	NA	NA	NA	NA	2.68E-08	NA	NA	NA	NA	NA	5.15E-08	NA	NA	NA	**2.75E-06**
Benz(a)anthracene[2]	3.09E-08	3.09E-08	NA	NA	NA	NA	2.01E-08	NA	NA	NA	NA	NA	3.86E-08	2.85E-07	NA	NA	**2.35E-06**
Benzene	3.61E-05	3.61E-05	NA	NA	NA	NA	2.34E-05	NA	NA	NA	NA	NA	4.51E-05	1.58E-04	7.03E-04	7.41E-04	**4.01E-03**
Benzo(a)pyrene[2]	2.06E-08	2.06E-08	NA	NA	NA	NA	1.34E-08	NA	NA	NA	NA	NA	2.58E-08	3.19E-08	NA	NA	**1.41E-06**
Benzo(b)fluoranthene[2]	3.09E-08	3.09E-08	NA	NA	NA	NA	2.01E-08	NA	NA	NA	NA	NA	3.86E-08	1.68E-08	NA	NA	**2.08E-06**
Benzo(g,h,i)perylene[2]	2.06E-08	2.06E-08	NA	NA	NA	NA	1.34E-08	NA	NA	NA	NA	NA	2.58E-08	8.30E-08	NA	NA	**1.46E-06**
Benzo(j)fluoranthene[2]	3.09E-08	3.09E-08	NA	NA	NA	NA	2.01E-08	NA	NA	NA	NA	NA	3.86E-08	2.63E-08	NA	NA	**2.09E-06**
Carbon Tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.88E-06	8.30E-06	**1.62E-05**
Chlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.74E-06	6.05E-06	**1.18E-05**
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.10E-06	6.43E-06	**1.25E-05**
Chrysene[2]	3.09E-08	3.09E-08	NA	NA	NA	NA	2.01E-08	NA	NA	NA	NA	NA	3.86E-08	5.99E-08	NA	NA	**2.13E-06**
Dibenzo(a,h) anthracene[2]	2.06E-08	2.06E-08	NA	NA	NA	NA	1.34E-08	NA	NA	NA	NA	NA	2.58E-08	9.90E-08	NA	NA	**1.48E-06**
Dichlorobenzene	2.06E-05	2.06E-05	NA	NA	NA	NA	1.34E-05	NA	NA	NA	NA	NA	2.58E-05	NA	NA	NA	**1.38E-03**
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.10E-05	1.16E-05	**2.27E-05**
Ethylene Dibromide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.48E-06	9.99E-06	**1.95E-05**
Fluoranthene[2]	5.15E-08	5.15E-08	NA	NA	NA	NA	3.35E-08	NA	NA	NA	NA	NA	6.44E-08	1.29E-06	NA	NA	**4.74E-06**
Fluorene[2]	4.81E-08	4.81E-08	NA	NA	NA	NA	3.13E-08	NA	NA	NA	NA	NA	6.01E-08	NA	NA	NA	**3.21E-06**
Formaldehyde	1.29E-03	1.29E-03	NA	NA	NA	NA	8.37E-04	NA	NA	NA	NA	NA	1.61E-03	2.00E-04	9.12E-03	9.61E-03	**1.05E-01**
Hexane	3.09E-02	3.09E-02	NA	NA	NA	NA	2.01E-02	NA	NA	NA	NA	NA	3.86E-02	NA	NA	NA	**2.07E+00**
Indo(1,2,3-cd)pyrene[2]	3.09E-08	3.09E-08	NA	NA	NA	NA	2.01E-08	NA	NA	NA	NA	NA	3.86E-08	6.37E-08	NA	NA	**2.13E-06**
Methanol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.36E-03	1.44E-03	**2.80E-03**
Methylene Chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.83E-05	1.93E-05	**3.77E-05**
Napthalene	1.05E-05	1.05E-05	NA	NA	NA	NA	6.81E-06	NA	NA	NA	NA	NA	1.31E-05	1.44E-05	4.32E-05	4.55E-05	**8.03E-04**
Phenanthrene[2]	2.92E-07	2.92E-07	NA	NA	NA	NA	1.90E-07	NA	NA	NA	NA	NA	3.65E-07	NA	NA	NA	**1.95E-05**
Propylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.38E-04	NA	NA	**4.38E-04**
Pyrene[2]	8.59E-08	8.59E-08	NA	NA	NA	NA	5.58E-08	NA	NA	NA	NA	NA	1.07E-07	8.11E-07	NA	NA	**6.55E-06**
Styrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.30E-06	5.58E-06	**1.09E-05**
Tetrachloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.00E+00**
Toluene	5.84E-05	5.84E-05	NA	NA	NA	NA	3.80E-05	NA	NA	NA	NA	NA	7.30E-05	6.94E-05	2.48E-04	2.62E-04	**4.48E-03**
Vinyl Chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.20E-06	3.37E-06	**6.56E-06**
Xylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.84E-05	8.68E-05	9.15E-05	**2.27E-04**
HAP Metals																	
Arsenic	3.44E-06	3.44E-06	NA	NA	NA	NA	2.23E-06	NA	3.34E-06	NA	NA	NA	4.29E-06	NA	NA	NA	**3.90E-04**
Beryllium	2.06E-07	2.06E-07	NA	NA	NA	NA	1.34E-07	NA	NA	NA	NA	NA	2.58E-07	NA	NA	NA	**6.28E-05**
Cadmium	1.89E-05	1.89E-05	NA	NA	NA	NA	1.23E-05	NA	8.56E-04	NA	NA	NA	2.36E-05	NA	NA	NA	**4.23E-02**
Chromium	2.40E-05	2.40E-05	NA	NA	2.63E-03	NA	1.56E-05	NA	1.59E-03	NA	NA	NA	3.01E-05	NA	NA	NA	**8.05E-02**
Cobalt	1.44E-06	1.44E-06	NA	NA	2.63E-03	NA	9.38E-07	NA	NA	NA	NA	NA	1.80E-06	NA	NA	NA	**2.73E-03**
Lead	8.59E-06	8.59E-06	NA	NA	NA	NA	5.58E-06	NA	1.06E-02	NA	NA	NA	1.07E-05	NA	NA	NA	**5.10E-01**
Manganese	6.53E-06	6.53E-06	NA	NA	8.36E-01	NA	4.24E-06	NA	3.26E-02	NA	NA	NA	6.16E-06	NA	NA	NA	**2.40E+00**
Mercury	4.47E-06	4.47E-06	NA	NA	NA	NA	2.90E-06	NA	1.34E-07	NA	NA	NA	5.58E-06	NA	NA	NA	**3.05E-04**
Nickel	3.61E-05	3.61E-05	NA	NA	2.63E-03	NA	2.34E-05	NA	1.60E-04	NA	NA	NA	4.51E-05	NA	NA	NA	**1.27E-02**
Selenium	4.12E-07	4.12E-07	NA	NA	NA	NA	2.68E-07	NA	NA	NA	NA	NA	5.15E-07	NA	NA	NA	**2.75E-05**
Total POM[2]	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**
Total Metal HAP	**0.00**	**0.00**	**0.00**	**0.00**	**0.84**	**0.00**	**0.00**	**0.00**	**0.05**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.05**
Total HAP	**0.03**	**0.03**	**0.00**	**0.00**	**0.84**	**0.00**	**0.02**	**0.00**	**0.05**	**0.00**	**0.00**	**0.00**	**0.04**	**0.00**	**0.01**	**0.02**	**5.24**

1. HAPs to be included in the Emissions Inve
Metals and polycyclic organic matter (POM
All other HAPs - report emissions of that H
2. Compound is a POM as specified by footn

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Table 3. Summary of Emissions Inventory Calculation Methods

Emission Point ID	Emission Unit ID	Emission Unit Description	Calculation Input	PM	PM_{10}	$PM_{2.5}$	NO_X	VOC	SO_2	CO	HAP
F001	EU001	Scrap Preparation Torches	Emission Factor Source:	AP-42 Table 12.5.1-1 (04/09)	Assume equivalent to PM	Assume equivalent to PM	AP-42 Table 1.4-1 (07/98)	AP-42 Table 1.4-1 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Tables 1.4-3 and 1.4-4 (07/98)
			Throughput:	tons scrap	tons scrap	tons scrap	MMscf of Natural Gas per year	MMscf of Natural Gas per year	MMscf of Natural Gas per year	MMscf of Natural Gas per year	MMscf of Natural Gas per year
S008/F003	EU003	Lime Bin #1 Load-In	Emission Factor Source (Fabric Filter):	Engineering Estimate	Engineering Estimate	Engineering Estimate	---	---	---	---	---
			Throughput (Fabric Filter):	dscfm exhaust gas	dscfm exhaust gas	dscfm exhaust gas	---	---	---	---	---
			Emission Factor Source (fugitive):	AP-42, Section 13.2.4 (11/06)	AP-42, Section 13.2.4 (11/06)	AP-42, Section 13.2.4 (11/06)	---	---	---	---	---
			Throughput (fugitive):	tons lime received	tons lime received	tons lime received	---	---	---	---	---
F005A	EU005A	Ladle Preheaters (4)	Emission Factor Source:	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-1 (07/98)	AP-42 Table 1.4-1 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Tables 1.4-3 and 1.4-4 (07/98)
			Throughput:	MMscf of Natural Gas/year	MMscf of Natural Gas/year	MMscf of Natural Gas/year	MMscf of Natural Gas/year	MMscf of Natural Gas/year	MMscf of Natural Gas/year	MMscf of Natural Gas/year	MMscf of Natural Gas/year
S008/F005	EU006	West Baghouse - Electric Arc Furnace #1 & Canopy Hood	Emission Factor Source (baghouse):	Based on Stack Testing	76% of total PM is PM10 - AP-42 Table 12.5-2 (01/95)	74% of total PM is PM2.5 - AP-42 Table 12.5-2 (01/95)	AP-42 Section 12.5, Table 12.5.1-4 (04/09)	AP-42 Section 12.5, Table 12.5.1-8 (04/09)	AP-42 Section 12.5, Table 12.5.1-6 (04/09)	AP-42 Section 12.5, Table 12.5.1-5 (04/09)	Baghouse dust analysis or AP-42
			Throughput (baghouse):	hrs/yr of operation	hrs/yr of operation	hrs/yr of operation	tons of steel produced	tons of steel produced	tons of steel produced	tons of steel produced	Wt %
			Throughput (fugitive):	hrs/yr of operation	hrs/yr of operation	hrs/yr of operation	---	---	---	---	---
S007/F005	EU007	Wheelabrator Baghouse - EAF #2	Emission Factor Source (baghouse):	Based on Stack Testing	76% of total PM is PM10 - AP-42 Table 12.5-2 (01/95)	74% of total PM is PM2.5 - AP-42 Table 12.5-2 (01/95)	AP-42 Section 12.5, Table 12.5.1-4 (04/09)	AP-42 Section 12.5, Table 12.5.1-8 (04/09)	AP-42 Section 12.5, Table 12.5.1-6 (04/09)	AP-42 Section 12.5, Table 12.5.1-5 (04/09)	Baghouse dust analysis or AP-42
			Throughput (baghouse):	hrs/yr of operation	hrs/yr of operation	hrs/yr of operation	tons of steel produced	tons of steel produced	tons of steel produced	tons of steel produced	Wt %
			Throughput (fugitive):	hrs/yr of operation	hrs/yr of operation	hrs/yr of operation	---	---	---	---	---

Date: **5/1/2020**

Table 3. Summary of Emissions Inventory Calculation Methods

Emission Point ID	Emission Unit ID	Emission Unit Description	Calculation Input	PM	PM_{10}	$PM_{2.5}$	NO_X	VOC	SO_2	CO	HAP
S008/S006	EU008	East Baghouse - EAF Canopy Hood	Emission Factor Source (baghouse):	Based on Stack Testing	76% of total PM is PM10 - AP-42 Table 12.5-2 (01/95)	74% of total PM is PM2.5 - AP-42 Table 12.5-2 (01/95)	(Already accounted for in EAF #1 & EAF #2 calculations)	(Already accounted for in EAF #1 & EAF #2 calculations)	(Already accounted for in EAF #1 & EAF #2 calculations)	(Already accounted for in EAF #1 & EAF #2 calculations)	Baghouse dust analysis or AP-42
			Throughput (baghouse):	hrs/yr of operation	hrs/yr of operation	hrs/yr of operation	hrs/yr of operation	hrs/yr of operation	hrs/yr of operation	hrs/yr of operation	Wt %
			Throughput (fugitive):	hrs/yr of operation	hrs/yr of operation	hrs/yr of operation	---	---	---	---	---
F005	EU009	Ladle Refurbishing	Emission Factor Source:	AP-42- Section 13.2.4	AP-42- Section 13.2.4	AP-42- Section 13.2.4	---	---	---	---	---
			Throughput:	# bricks/yr	# bricks/yr	# bricks/yr	---	---	---	---	---
S007/F005	EU010	Tundish Cleaning/Refurbishing	Emission Factor Source:	AP-42- Section 13.2.4	AP-42- Section 13.2.4	AP-42- Section 13.2.4	---	---	---	---	---
			Throughput:	tons/hr	tons/hr	tons/hr	---	---	---	---	---
F005	EU011	Slag Handling	Emission Factor Source:	AP-42, Section 12.5-4 (01/95)	AP-42, Section 12.5-4 (01/95)	AP-42, Section 12.5-4 (01/95)	---	---	---	---	---
			Throughput:	tons of slag	tons of slag	tons of slag	---	---	---	---	---
F005	EU012	Continuous Caster	Emission Factor Source:	AP-42, Table 12.5.1-8 (04/09)	76% of total PM is PM10 - AP-42 Table 12.5-2 (01/95)	74% of total PM is PM2.5 - AP-42 Table 12.5-2 (01/95)	---	---	---	---	---
			Throughput:	tons poured	tons poured	tons poured	---	---	---	---	---
F005	EU013	Caster Cutoff Torches	Emission Factor Source:	AP-42 Table 12.5.1-1 (04/09)	AP-42 Table 12.5.1-1 (04/09)	AP-42 Table 12.5.1-1 (04/09)	AP-42 Table 1.4-1 (07/98)	AP-42 Table 1.4-1 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Tables 1.4-3 and 1.4-4 (07/98)
			Throughput:	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr
S014	EU014	#1 Reheat Furnace	Emission Factor Source:	AP-42 Table 12.5.1-1 (04/09)	AP-42 Table 12.5.1-1 (04/09)	AP-42 Table 12.5.1-1 (04/09)	AP-42 Table 12.5.1-4 (04/09)	AP-42 Table 12.5.1-8 (04/09)	AP-42 Table 1.4-2	AP-42 Table 12.5.1-5 (04/09)	AP-42 Tables 1.4-3 and 1.4-4 (07/98)
			Throughput:	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr

Date: **5/1/2020**

Table 3. Summary of Emissions Inventory Calculation Methods

Emission Point ID	Emission Unit ID	Emission Unit Description	Calculation Input	PM	PM_{10}	$PM_{2.5}$	NO_X	VOC	SO_2	CO	HAP
S016	EU016	#2 Reheat Furnace	Emission Factor Source:	AP-42 Table 12.5.1-1 (04/09)	AP-42 Table 12.5.1-1 (04/09)	AP-42 Table 12.5.1-1 (04/09)	AP-42 Table 12.5.1-4 (04/09)	AP-42 Table 12.5.1-8 (04/09)	AP-42 Table 1.4-2	AP-42 Table 12.5.1-5 (04/09)	AP-42 Tables 1.4-3 and 1.4-4 (07/98)
			Throughput:	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr
F015	EU015	Hot Rolling Mill #1	Emission Factor Source:	Site-specific emission factor from Title V Application	Site-specific emission factor from Title V Application	Site-specific emission factor from Title V Application	---	---	---	---	---
F017	EU017	Hot Rolling Mill #2	Emission Factor Source:	Site-specific emission factor from Title V Application	Site-specific emission factor from Title V Application	Site-specific emission factor from Title V Application	---	---	---	---	---
F020	EU020	Paint Application	Emission Factor Source:	---	---	---	---	SDS for Low VOC Waterborne Black Primer from Farrell-Calhoun dated	---	---	0
			Throughput:	---	---	---	---	gallons/yr	---	---	gallons/yr
S021	EU021	Paint Drying Oven	Emission Factor Source:	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-1 (07/98)	AP-42 Table 1.4-1 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Tables 1.4-3 and 1.4-4 (07/98)
			Throughput:	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr
S022	EU022	Continuous Wax Line Heater	Emission Factor Source:	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-1 (07/98)	AP-42 Table 1.4-1 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Tables 1.4-3 and 1.4-4 (07/98)
			Throughput:	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr
F023a,b	EU023	Wax Application	Emission Factor Source:	---	---	---	---	MSDS Non-Rust 1210; Daughbert Chemical Company; dated	---	---	---
			Throughput:	---	---	---	---	gallons	---	---	---
S024	EU024	Shot Blaster; Blast Cleaning Products	Emission Factor Source:	Site-specific emission factor from Title V Permit Application (3/1/2004)	assume equivalent to PM	assume equivalent to PM	---	---	---	---	---
			Throughput:	hours per year	hours per year	hours per year	---	---	---	---	---
F025	EU025	Welding	Emission Factor Source:	Assumed 100% of PM10	AP-42, Table 12.19-1 GMAW (01/95)	Assumed 100% of PM10	---	---	---	---	AP-42, Table 12.19-2 GMAW (01/95)
			Throughput:	lbs of wire per year	lbs of wire per year	lbs of wire per year	---	---	---	---	lbs of wire per year

Date: **5/1/2020**

Table 3. Summary of Emissions Inventory Calculation Methods

Emission Point ID	Emission Unit ID	Emission Unit Description	Calculation Input	PM	PM_{10}	$PM_{2.5}$	NO_X	VOC	SO_2	CO	HAP
F026	EU026	Cold Cleaner	Emission Factor Source:	---	---	---	---	SDS for Safety Kleen Premium Solvent	---	---	SDS for Safety Kleen Premium Solvent
			Throughput:	---	---	---	---	gal/hr	---	---	gal/hr
F027	EU027	Scrap Cutup Torches	Emission Factor Source:	AP-42 Table 12.5.1-1 (04/09)	AP-42 Table 12.5.1-1 (04/09)	AP-42 Table 12.5.1-1 (04/09)	AP-42 Table 1.4-1 (07/98)	AP-42 Table 1.4-1 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Tables 1.4-3 and 1.4-4 (07/98)
			Throughput:	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr
F030	EU030	Alloy Handling	Emission Factor Source:	AP-42, Section 11.24-2 (01/95)	AP-42, Section 11.24-2 (01/95)	AP-42, Section 11.24-2 (01/95)	---	---	---	---	---
			Throughput:	tons of alloy	tons of alloy	tons of alloy	---	---	---	---	---
S031 & S032	EU301 & EU032	Cooling Towers	Emission Factor Source:	Assume Equivalent to PM10	AP-42 Table 13.4-1 (09/95)	Assume Equivalent to PM10	---	---	---	---	---
			Throughput:	gpm	gpm	gpm	---	---	---	---	---
F028	EU028	Roadways	Emission Factor Source:	See calculations below	See calculations below	See calculations below	---	---	---	---	---
			Throughput:	VMT/yr	VMT/yr	VMT/yr	---	---	---	---	---
S033	EU033	Space Heaters	Emission Factor Source:	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-1 (07/98)	AP-42 Table 1.4-1 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Table 1.4-2 (07/98)	AP-42 Tables 1.4-3 and 1.4-4 (07/98)
			Throughput:	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr	MMscf/yr
S034	EU034	Emergency Generator #1, diesel-fired	Emission Factor Source:	AP-42 Table 3.3-1 (10/96)	AP-42 Table 3.3-1 (10/96)	AP-42 Table 3.3-1 (10/96)	AP-42 Table 3.3-1 (10/96)	AP-42 Table 3.3-1 (10/96)	AP-42 Table 3.3-1 (10/96)	AP-42 Table 3.3-1 (10/96)	AP-42 Table 3.3-2 (10/96)
			Throughput:	gallons	gallons	gallons	gallons	gallons	gallons	gallons	gallons
S035 & S036	EU035 & EU036	Emergency Generator #2; natural gas-fired Emergency Generator #3; natural-gas fired	Emission Factor Source:	AP-42 Table 3.2-3 (7/00)	AP-42 Table 3.2-3 (7/00)	AP-42 Table 3.2-3 (7/00)	AP-42 Table 3.2-3 (7/00)	AP-42 Table 3.2-3 (7/00)	AP-42 Table 3.2-3 (7/00)	AP-42 Table 3.2-3 (7/00)	AP-42 Table 3.2-3 (7/00)
			Throughput:	MMBtu	MMBtu	MMBtu	MMBtu	MMBtu	MMBtu	MMBtu	MMBtu

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Scrap Preparation Torches

Annual Processing Rate: 39,464 tons scrap
Annual Operating Rate: 8760 hrs per year
Design Rating: 0.5 MMBtu/hr
Fuel Usage: 4.3 MMscf of Natural Gas per year

Emission Point ID: F001
Emission Unit ID: EU001
SCC: 30390003

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	0.14	0.63	0.032	lb/ton	AP-42 Table 12.5.1-1 (04/09)	Factor for NG fired billet cutting torches
Particulate Matter <10 microns (PM_{10FIL})	0.14	0.63	0.032	lb/ton	AP-42 Table 12.5.1-1 (04/09)	Assumed equivalent to PM
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	0.14	0.63	0.032	lb/ton	AP-42 Table 12.5.1-1 (04/09)	Assumed equivalent to PM
Particulate Matter, Condensable (PM_{CON})	0.00	0.01	5.7	lb/MMscf	AP-42 Table 1.4-1 (07/98)	Factor for NG combustion (small boilers)
Nitrogen Oxides (NO_X)	0.05	0.21	100	lb/MMscf	AP-42 Table 1.4-1 (07/98)	Factor for NG combustion (small boilers)
Volatile Organic Compounds (VOC)	2.70E-03	0.01	5.5	lb/MMscf	AP-42 Table 1.4-1 (07/98)	Factor for NG combustion (small boilers)
Sulfur Dioxide (SO_2)	2.94E-04	1.29E-03	0.6	lb/MMscf	AP-42 Table 1.4-2 (07/98)	Factor for NG combustion (small boilers)
Carbon Monoxide (CO)	0.04	0.18	84	lb/MMscf	AP-42 Table 1.4-2 (07/98)	Factor for NG combustion (small boilers)
HAP:	9.26E-04	4.05E-03	(See Table Below)		AP-42 Tables 1.4-3 and 1.4-4 (07/98)	

Process: Scrap Preparation Torches

Annual Processing Rate:	39,464	tons scrap	**Emission Point ID:**	F001
Annual Operating Rate:	8760	hrs per year	**Emission Unit ID:**	**EU001**
Design Rating:	0.5	MMBtu/hr	**SCC:**	30390003
Fuel Usage:	4.3	MMscf of Natural Gas per year		

Natural Gas Combustion HAP Emissions[1]

Pollutant	CAS Number	(lb/MMscf)	Potential Emissions (lb/hr)	Potential Emissions (tpy)
Speciated Organics				
2-Methylnaphthalene	91-57-6	2.4E-05	1.2E-08	5.2E-08
3-Methylchloranthrene	56-49-5	1.8E-06	8.8E-10	3.9E-09
7,12-Dimethylbenz(a)anthracene	57-97-6	1.6E-05	7.8E-09	3.4E-08
Acenaphthene	83-32-9	1.8E-06	8.8E-10	3.9E-09
Acenaphthylene	203-96-8	1.8E-06	8.8E-10	3.9E-09
Anthracene	120-12-7	2.4E-06	1.2E-09	5.2E-09
Benz(a)anthracene	56-55-3	1.8E-06	8.8E-10	3.9E-09
Benzene	71-43-2	2.1E-03	1.0E-06	4.5E-06
Benzo(a)pyrene	50-32-8	1.2E-06	5.9E-10	2.6E-09
Benzo(b)fluoranthene	205-99-2	1.8E-06	8.8E-10	3.9E-09
Benzo(g,h,i)perylene	191-24-2	1.2E-06	5.9E-10	2.6E-09
Benzo(k)fluoranthene	205-82-3	1.8E-06	8.8E-10	3.9E-09
Chrysene	218-01-9	1.8E-06	8.8E-10	3.9E-09
Dibenzo(a,h) anthracene	53-70-3	1.2E-06	5.9E-10	2.6E-09
Dichlorobenzene	25321-22-6	1.2E-03	5.9E-07	2.6E-06
Fluoranthene	206-44-0	3.0E-06	1.5E-09	6.4E-09
Fluorene	86-73-7	2.8E-06	1.4E-09	6.0E-09
Formaldehyde	50-00-0	7.5E-02	3.7E-05	1.6E-04
Hexane	110-54-3	1.8E+00	8.8E-04	3.9E-03
Indo(1,2,3-cd)pyrene	193-39-5	1.8E-06	8.8E-10	3.9E-09
Napthalene	91-20-3	6.1E-04	3.0E-07	1.3E-06
Phenanthrene	85-01-8	1.7E-05	8.3E-09	3.7E-08
Pyrene	129-00-0	5.0E-06	2.5E-09	1.1E-08
Toluene	108-88-3	3.4E-03	1.7E-06	7.3E-06
Metals				
Arsenic	7440-38-2	2.0E-04	9.8E-08	4.3E-07
Beryllium	7440-41-7	1.2E-05	5.9E-09	2.6E-08
Cadmium	7440-43-9	1.1E-03	5.4E-07	2.4E-06
Chromium	7440-47-3	1.4E-03	6.9E-07	3.0E-06
Cobalt	7440-48-4	8.4E-05	4.1E-08	1.8E-07
Lead	7439-92-1	5.0E-04	2.5E-07	1.1E-06
Manganese	7439-96-5	3.8E-04	1.9E-07	8.2E-07
Mercury	7439-97-6	2.6E-04	1.3E-07	5.6E-07
Nickel	7440-02-0	2.1E-03	1.0E-06	4.5E-06
Selenium	7782-49-2	2.4E-05	1.2E-08	5.2E-08
Total HAP			**9.3E-04**	**4.1E-03**
Non-HAP Metals				
Barium	7440-39-3	4.4E-03	2.2E-06	9.4E-06
Copper	7440-50-8	8.50E-04	4.17E-07	1.83E-06
Molybdenum	7439-98-7	1.10E-03	5.39E-07	2.36E-06
Vanadium	7440-62-2	2.30E-03	1.13E-06	4.94E-06
Zinc	7440-66-6	2.90E-02	1.42E-05	6.23E-05

1. Emission factors obtained from AP-42 Section 1.4 Natural Gas Fired External Combustion Sources (07/98).

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Lime Bin #1

Annual Processing Rate:	14,584	tons lime received	**Emission Point ID:**	S008 / F003
Lime Bin Filter Exhaust:	1000	dscfm exhaust gas	**Emission Unit ID:**	EU003
Operating Hours:	8760	hours per year	**SCC:**	30300998
Control Device:	Fugitives - CE006, CE007, CE008		**Year Installed:**	1970
			Design Capacity:	1.66 tons/hr

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})[1]	0.17	0.75	0.02	gr/dscf	Engineering Estimate	Fabric filter outlet grain loading (gr/dscf)
Particulate Matter <10 microns (PM_{10FIL})[1]	0.17	0.75	0.02	gr/dscf	Engineering Estimate	Assumed equivalent to PM
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)[1]	0.17	0.75	0.02	gr/dscf	Engineering Estimate	Assumed equivalent to PM
Fugitive PM[1,2]	0.03	0.12	0.084	lb/ton	AP-42, Section 13.2.4 (11/06)	One transfer point inside - captured by canopy to baghouse (80%)
Fugitive PM_{10}[1,2]	0.01	0.06	0.040	lb/ton	AP-42, Section 13.2.4 (11/06)	One transfer point inside - captured by canopy to baghouse (80%)
Fugtive $PM_{2.5}$[1,2]	0.00	0.01	0.006	lb/ton	AP-42, Section 13.2.4 (11/06)	One transfer point inside - captured by canopy to baghouse (80%)
HAP:	NA	NA				

1. All PM is filterable only (this is a non-combustion process).
2. Fugitive emission factors are calculated using AP-42 Section 13.2.4 assuming one transfer from the bin to conveyor.

$$E = k(0.0032)\frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}}(lb/ton)$$

k =	0.74	PM - (AP-42, Section 13.2.4 (11/06), for Particle Size < 30 mm)
	0.35	PM_{10} - (AP-42, Section 13.2.4 (11/06), for Particle Size < 10 mm)
	0.053	$PM_{2.5}$ - (AP-42, Section 13.2.4 (11/06), for Particle Size < 2.5 mm)
Mean Wind Speed (mph): U =	6.52	40-yr average for Huntington, WV (from http://www.ncdc.noaa.gov/oa/climate/online/ccd/avgwind.html)
Lime Moisture Content (%) =	0.2	per AP-42, Section 13.2.4, Table 13.2.4-1 (11/06)

Type of Material	PM Emission Factor (lb/ton)	PM_{10} Emission Factor (lb/ton)	$PM_{2.5}$ Emission Factor (lb/ton)
Lime	0.08404	0.03975	0.00602

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Ladle Preheaters (4)

Rated Capacity:	22	MMBtu/hr	(total)	**Emission Point ID:**	F005A
Hours of Operation:	8760	hrs/yr		**Emission Unit ID:**	EU005A
Fuel Usage:	188.94	MMscf of Natural Gas/year		**SCC Code:**	30390003
Control Device:	CE005			**Year Installed:**	2013
				Design Capacity:	5.5 MMBtu/hr (each)

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Critieria:						
Particulate Matter, Filterable (PM_{FIL})	0.04	0.18	1.9	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
Particulate Matter <10 microns (PM_{10FIL})	0.04	0.18	1.9	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	0.04	0.18	1.9	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
Particulate Matter, Condensable (PM_{CON})	0.12	0.54	5.7	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
Nitrogen Oxides (NO_X)	2.16	9.45	100	lb/MMscf	AP-42 Table 1.4-1 (07/98)	
Volatile Organic Compounds (VOC)	0.12	0.52	5.5	lb/MMscf	AP-42 Table 1.4-1 (07/98)	
Sulfur Dioxide (SO_2)	0.01	0.06	0.6	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
Carbon Monoxide (CO)	1.81	7.94	84	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
HAP:	4.07E-02	1.78E-01	(See Table Below)		AP-42 Tables 1.4-3 and 1.4-4 (07/98)	

Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Ladle Preheaters (4)

Rated Capacity:	22	MMBtu/hr	(total)	**Emission Point ID:**	F005A
Hours of Operation:	8760	hrs/yr		**Emission Unit ID:**	EU005A
Fuel Usage:	188.94	MMscf of Natural Gas/year		**SCC Code:**	30390003
				Year Installed:	2013

Natural Gas Combustion HAP Emissions[1]

Pollutant	CAS Number	(lb/MMscf)	Potential Emissions (lb/hr)	Potential Emissions (tpy)
Speciated Organics				
2-Methylnaphthalene	91-57-6	2.4E-05	5.2E-07	2.27E-06
3-Methylchloranthrene	56-49-5	1.8E-06	3.9E-08	1.70E-07
7,12-Dimethylbenz(a)anthracene	57-97-6	1.6E-05	3.5E-07	1.51E-06
Acenaphthene	83-32-9	1.8E-06	3.9E-08	1.70E-07
Acenaphthylene	203-96-8	1.8E-06	3.9E-08	1.70E-07
Anthracene	120-12-7	2.4E-06	5.2E-08	2.27E-07
Benz(a)anthracene	56-55-3	1.8E-06	3.9E-08	1.70E-07
Benzene	71-43-2	2.1E-03	4.5E-05	1.98E-04
Benzo(a)pyrene	50-32-8	1.2E-06	2.6E-08	1.13E-07
Benzo(b)fluoranthene	205-99-2	1.8E-06	3.9E-08	1.70E-07
Benzo(g,h,i)perylene	191-24-2	1.2E-06	2.6E-08	1.13E-07
Benzo(k)fluoranthene	205-82-3	1.8E-06	3.9E-08	1.70E-07
Chrysene	218-01-9	1.8E-06	3.9E-08	1.70E-07
Dibenzo(a,h) anthracene	53-70-3	1.2E-06	2.6E-08	1.13E-07
Dichlorobenzene	25321-22-6	1.2E-03	2.6E-05	1.13E-04
Fluoranthene	206-44-0	3.0E-06	6.5E-08	2.83E-07
Fluorene	86-73-7	2.8E-06	6.0E-08	2.65E-07
Formaldehyde	50-00-0	7.5E-02	1.6E-03	7.09E-03
Hexane	110-54-3	1.8E+00	3.9E-02	1.70E-01
Indo(1,2,3-cd)pyrene	193-39-5	1.8E-06	3.9E-08	1.70E-07
Napthalene	91-20-3	6.1E-04	1.3E-05	5.76E-05
Phenanthrene	85-01-8	1.7E-05	3.7E-07	1.61E-06
Pyrene	129-00-0	5.0E-06	1.1E-07	4.72E-07
Toluene	108-88-3	3.4E-03	7.3E-05	3.21E-04
Metals				
Arsenic	7440-38-2	2.0E-04	4.3E-06	1.89E-05
Beryllium	7440-41-7	1.2E-05	2.6E-07	1.13E-06
Cadmium	7440-43-9	1.1E-03	2.4E-05	1.04E-04
Chromium	7440-47-3	1.4E-03	3.0E-05	1.32E-04
Cobalt	7440-48-4	8.4E-05	1.8E-06	7.94E-06
Lead	7439-92-1	5.0E-04	1.1E-05	4.72E-05
Manganese	7439-96-5	3.8E-04	8.2E-06	3.59E-05
Mercury	7439-97-6	2.6E-04	5.6E-06	2.46E-05
Nickel	7440-02-0	2.1E-03	4.5E-05	1.98E-04
Selenium	7782-49-2	2.4E-05	5.2E-07	2.27E-06
Total HAP			**4.1E-02**	**1.78E-01**
Non-HAP Metals				
Barium	7440-39-3	4.4E-03	9.5E-05	4.16E-04
Copper	7440-50-8	8.50E-04	1.83E-05	8.03E-05
Molybdenum	7439-98-7	1.10E-03	2.37E-05	1.04E-04
Vanadium	7440-62-2	2.30E-03	4.96E-05	2.17E-04
Zinc	7440-66-6	2.90E-02	6.25E-04	2.74E-03

1. Emission factors obtained from AP-42 Section 1.4 Natural Gas Fired External Combustion Sources (07/98).

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: East Baghouse CE006

Annual Processing Rate: 175,200 tons of steel produced
Hours of Operation: 8,760 hrs/yr of operation

Emission Units Controlled:

	EAF #2	EAF Canopy Hood
Emission Point ID:	S007 / F005	S008 / S006
Emission Unit ID:	EU007	EU008
SCC Code:	30300908	30300908
Year Installed:	1979	1989
Design Capacity:	20 tons/hr	40 tons/hr
Control Device:	CE006	CE008, CE006, CE007

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	1.73	7.58	1.73	lb/hr	Based on Stack Testing	Melt Shop Canopy Upgrades occurred from 6/20 - 7/6/2010. The "new" system operated all of 2011.
Particulate Matter <10 microns (PM_{10FIL})	1.31	5.76	1.31	lb/hr	76% of total PM is PM_{10} - AP-42 Table 12.5-2 (01/95)	58% in TV Application (AP-42 uncontrolled factor?)
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	1.28	5.61	1.28	lb/hr	74% of total PM is $PM_{2.5}$ - AP-42 Table 12.5-2 (01/95)	
Particulate Matter, Condensable (PM_{CON})	0.78	3.42	0.04	lb/ton	AP-42 Section 12.5, Table 12.5.1-2 (04/09)	Aqueous + Organic Condensable PM
Nitrogen Oxides (NO_X)	4.40	19.27	0.22	lb/ton	AP-42 Section 12.5, Table 12.5.1-4 (04/09)	0.54 lb/ton in TV Application
Volatile Organic Compounds (VOC)	0.46	2.01	0.023	lb/ton	AP-42 Section 12.5, Table 12.5.1-8 (04/09)	0.35 lb/ton in TV Application
Sulfur Dioxide (SO_2)	4.00	17.52	0.2	lb/ton	AP-42 Section 12.5, Table 12.5.1-6 (04/09)	0.7 lb/ton in TV Application
Carbon Monoxide (CO)	36.00	157.68	1.8	lb/ton	AP-42 Section 12.5, Table 12.5.1-5 (04/09)	18 lb/ton in TV Application
HAP:						
Arsenic (As)	8.65E-06	3.79E-05	5.00E-04	wt. %	2018 Dust Analysis (1 sample)	6.2E-06 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Beryllium (Be)	5.60E-06	2.45E-05	2.80E-07	lb/ton	AP-42 Table 12.5.1-9 (04/09)	
Cadmium (Ca)	2.21E-03	9.70E-03	1.28E-01	wt. %	Max of 2019 Monthly Dust Analyses	5.0E-06 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Chromium (Cr)	4.12E-03	1.80E-02	2.38E-01	wt. %	Max of 2019 Monthly Dust Analyses	3.5E-06 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Fluoride (F)	1.18	5.17	5.90E-02	lb/ton	AP-42 Table 12.5.1-9 (04/09)	Not a listed HAP
Lead (Pb)	2.75E-02	1.21E-01	1.59E+00	wt. %	Max of 2019 Monthly Dust Analyses	0.00056 lb/ton AP-42 Table 12.5.1-7 (04/09)
Mercury (Hg)	3.46E-07	1.52E-06	2.00E-05	wt. %	2018 Dust Analysis (1 sample)	1.1E-04 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Manganese (Mn)	8.45E-02	3.70E-01	4.88E+00	wt. %	Max of 2019 Monthly Dust Analyses	3.0E-04 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Nickel (Ni)	4.15E-04	1.82E-03	2.40E-02	wt. %	Max of 2019 Monthly Dust Analyses	5.5E-05 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Zinc (Zn)	5.64E-01	2.47E+00	3.26E+01	wt. %	Max of 2019 Monthly Dust Analyses	Not a listed HAP

Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: East Baghouse CE006

Annual Processing Rate: 175,200 tons of steel produced
Hours of Operation: 8,760 hrs/yr of operation

Emission Units Controlled:

	EAF #2	EAF Canopy Hood
Emission Point ID:	S007 / F005	S008 / S006
Emission Unit ID:	EU007	EU008
SCC Code:	30300908	30300908

Month	% Zinc (Zn)	% Lead (Pb)	% Cadmium (Cd)	% Manganese (Mn)	% Chromium (Cr)	% Nickel (Ni)	% Arsenic (As)	% Mercury (Hg)
January	28.5	1.2	0.0390	4.9	0.238	0.0230	5.00E-04	2.00E-05
February	26.5	1.0	0.0140	4.5	0.199	0.0230	-	-
March	28.3	1.6	0.1280	4.5	0.221	0.0190	-	-
April	26.7	1.2	0.0490	4.6	0.211	0.0180	-	-
May	26.6	1.4	0.0530	4.7	0.226	0.0240	-	-
June	0.0	0.0	0.0000	0.0	0.000	0.0000	-	-
July	29.9	1.6	0.0590	4.4	0.214	0.0180	-	-
August	32.6	1.6	0.0600	4.2	0.192	0.0170	-	-
September	29.9	1.4	0.0540	4.0	0.199	0.0190	-	-
October	30.6	1.4	0.0550	4.1	0.194	0.0170	-	-
November	32.0	1.4	0.0570	3.8	0.185	0.0170	-	-
December	29.8	1.4	0.0520	3.6	0.173	0.0170	-	-
Max	**32.63**	**1.59**	**0.13**	**4.88**	**0.24**	**0.02**	**5.00E-04**	**2.00E-05**

1. Zn, Pb, Cd, Mn, Cr, Ni - Dust analysis performed on a monthly composite sample and results are presented in percent on a dry weight basis.
2. As - This is not analyzed monthly - all available 2019 data used to calculate annual average.
3. Hg - This is only analyzed once per year for TRI reporting purposes.

Particulate Emission Factor (Post-Melt Shop Canopy Upgrades - July 2010)

Source / Test Run #	Stack Test Data (gr/dscf)[1]			Baghouse Exhaust Rate (dscfm)[2]			Mass Emissions (lb/hr)			Average Test Result (lb/hr)
	1	2	3	1	2	3	1	2	3	
East Baghouse CE006	0.00058	0.00069	0.00065	334,896	322,312	294,344	1.66	1.90	1.64	1.73

1. EPA Method 5 stack test performed on October 27 and 28, 2010 (filterable PM only).
2. Actual stack flow rate as measured during the stack test.

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Wheelabrator Baghouse CE007

Annual Processing Rate: 350,400 tons of steel produced
Hours of Operation: 8,760 hrs/yr of operation

Emission Units Controlled:

	EAF Canopy Hood	Tundish Cleaning and Refurbishing
Emission Point ID:	S008 / S006	F005
Emission Unit ID:	EU008	EU010
SCC Code:	30300908	30300998
Year Installed:	1989	
Design Capacity:	40 tons/hr	0.02 tons/hr
Control Device:	CE008, CE006, CE007	CE007

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	1.04	4.56	1.04	lb/hr	Based on Stack Testing	Melt Shop Canopy Upgrades occurred from 6/20 - 7/6/2010. The "new" system operated all of 2011.
Particulate Matter <10 microns (PM_{10FIL})	0.79	3.46	0.79	lb/hr	76% of total PM is PM_{10} - AP-42 Table 12.5-2 (01/95)	58% in TV Application (AP-42 uncontrolled factor?)
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	0.77	3.37	0.77	lb/hr	74% of total PM is $PM_{2.5}$ - AP-42 Table 12.5-2 (01/95)	
Particulate Matter, Condensable (PM_{CON})	1.56	6.83	0.04	lb/ton	AP-42 Section 12.5, Table 12.5.1-2 (04/09)	Aqueous + Organic Condensable PM
Nitrogen Oxides (NO_X)	NA	NA			(Already accounted for in EAF #1 & EAF #2 calculations)	
Volatile Organic Compounds (VOC)	NA	NA			(Already accounted for in EAF #1 & EAF #2 calculations)	
Sulfur Dioxide (SO_2)	NA	NA			(Already accounted for in EAF #1 & EAF #2 calculations)	
Carbon Monoxide (CO)	NA	NA			(Already accounted for in EAF #1 & EAF #2 calculations)	
HAP:						
Arsenic (As)	5.20E-06	2.28E-05	5.00E-04	wt. %	2018 Dust Analysis (1 sample)	6.2E-06 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Beryllium (Be)	NA	NA			(Already accounted for in EAF #1 and #2 calculations)	
Cadmium (Ca)	1.33E-03	5.83E-03	1.28E-01	wt. %	Max of 2019 Monthly Dust Analyses	5.0E-06 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Chromium (Cr)	2.48E-03	1.08E-02	2.38E-01	wt. %	Max of 2019 Monthly Dust Analyses	3.5E-06 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Fluoride (F)	NA	NA			(Already accounted for in EAF #1 and #2 calculations)	Not a listed HAP
Lead (Pb)	1.66E-02	7.25E-02	1.59E+00	wt. %	Max of 2019 Monthly Dust Analyses	0.00056 lb/ton AP-42 Table 12.5.1-7 (04/09)
Mercury (Hg)	2.08E-07	9.11E-07	2.00E-05	wt. %	2018 Dust Analysis (1 sample)	1.1E-04 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Manganese (Mn)	5.08E-02	2.22E-01	4.88E+00	wt. %	Max of 2019 Monthly Dust Analyses	3.0E-04 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Nickel (Ni)	2.50E-04	1.09E-03	2.40E-02	wt. %	Max of 2019 Monthly Dust Analyses	5.5E-05 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Zinc (Zn)	3.39E-01	1.49E+00	3.26E+01	wt. %	Max of 2019 Monthly Dust Analyses	Not a listed HAP

Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Wheelabrator Baghouse CE007

Emission Units Controlled:

	EAF Canopy Hood	Tundish Cleaning and Refurbishing
Emission Point ID:	S008 / S006	F005
Emission Unit ID:	EU008	EU010

Annual Processing Rate: 350,400 tons of steel produced
Hours of Operation: 8,760 hrs/yr of operation

Month	% Zinc (Zn)	% Lead (Pb)	% Cadmium (Cd)	% Manganese (Mn)	% Chromium (Cr)	% Nickel (Ni)	% Arsenic (As)	% Mercury (Hg)
January	28.5	1.2	0.0390	4.9	0.238	0.0230	5.00E-04	2.00E-05
February	26.5	1.0	0.0140	4.5	0.199	0.0230	-	-
March	28.3	1.6	0.1280	4.5	0.221	0.0190	-	-
April	26.7	1.2	0.0490	4.6	0.211	0.0180	-	-
May	26.6	1.4	0.0530	4.7	0.226	0.0240	-	-
June	0.0	0.0	0.0000	0.0	0.000	0.0000	-	-
July	29.9	1.6	0.0590	4.4	0.214	0.0180	-	-
August	32.6	1.6	0.0600	4.2	0.192	0.0170	-	-
September	29.9	1.4	0.0540	4.0	0.199	0.0190	-	-
October	30.6	1.4	0.0550	4.1	0.194	0.0170	-	-
November	32.0	1.4	0.0570	3.8	0.185	0.0170	-	-
December	29.8	1.4	0.0520	3.6	0.173	0.0170	-	-
Max	**32.63**	**1.59**	**0.13**	**4.88**	**0.24**	**0.02**	**5.00E-04**	**2.00E-05**

1. Zn, Pb, Cd, Mn, Cr, Ni - Dust analysis performed on a monthly composite sample and results are presented in percent on a dry weight basis.
2. As - This is not analyzed monthly - all available 2019 data used to calculate annual average.
3. Hg - This is only analyzed once per year for TRI reporting purposes.

Particulate Emission Factor (Post-Melt Shop Canopy Upgrades - July 2010)

Source	Stack Test Data (gr/dscf)[1]			Baghouse Exhaust Rate (dscfm)[2]			Mass Emissions (lb/hr)			Average Test Result (lb/hr)
Test Run #	1	2	3	1	2	3	1	2	3	
Wheelabrator Baghouse CE007	0.00073	0.00071	0.00096	150,848	155,287	150,382	0.94	0.94	1.24	1.04

1. EPA Method 5 stack test performed on October 27 and 28, 2010 (filterable PM only).
2. Actual stack flow rate as measured during the stack test.

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: West Baghouse CE008

Annual Processing Rate: 175,200 tons of steel produced
Hours of Operation: 8,760 hrs/yr of operation

Emission Units Controlled:

	EAF #1	EAF Canopy Hood
Emission Point ID:	S008 / F005	S008 / S006
Emission Unit ID:	EU006	EU008
SCC Code:	30300908	30300908
Year Installed:	1979	1989
Design Capacity:	20 tons/hr	40 tons/hr
Control Device:	CE008	CE008, CE006, CE007

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	1.75	7.67	1.75	lb/hr	Based on Stack Testing	Melt Shop Canopy Upgrades occurred from 6/20 - 7/6/2010. The "new" system operated all of 2011.
Particulate Matter <10 microns (PM_{10FIL})	1.33	5.83	1.33	lb/hr	76% of total PM is PM_{10} - AP-42 Table 12.5-2 (01/95)	58% in TV Application (AP-42 uncontrolled factor?)
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	1.30	5.67	1.30	lb/hr	74% of total PM is $PM_{2.5}$ - AP-42 Table 12.5-2 (01/95)	
Particulate Matter, Condensable (PM_{CON})	0.78	3.42	0.04	lb/ton	AP-42 Section 12.5, Table 12.5.1-2 (04/09)	Aqueous + Organic Condensable PM
Nitrogen Oxides (NO_X)	4.40	19.27	0.22	lb/ton	AP-42 Section 12.5, Table 12.5.1-4 (04/09)	0.54 lb/ton in TV Application 0.000115 lb/ton FIRE Version 6.25
Volatile Organic Compounds (VOC)	0.46	2.01	0.023	lb/ton	AP-42 Section 12.5, Table 12.5.1-8 (04/09)	0.35 lb/ton in TV Application 0.35 lb/ton FIRE Version 6.25
Sulfur Dioxide (SO_2)	4.00	17.52	0.2	lb/ton	AP-42 Section 12.5, Table 12.5.1-6 (04/09)	0.7 lb/ton in TV Application 0.7 lb/ton FIRE Version 6.25
Carbon Monoxide (CO)	36.00	157.68	1.8	lb/ton	AP-42 Section 12.5, Table 12.5.1-5 (04/09)	18 lb/ton in TV Application
HAP:						
Arsenic (As)	8.75E-06	3.83E-05	5.00E-04	wt. %	2018 Dust Analysis (1 sample)	6.2E-06 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Beryllium (Be)	5.60E-06	2.45E-05	2.80E-07	lb/ton	AP-42 Table 12.5.1-9 (04/09)	
Cadmium (Ca)	2.24E-03	9.81E-03	1.28E-01	wt. %	Max of 2019 Monthly Dust Analyses	5.0E-06 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Chromium (Cr)	4.17E-03	1.82E-02	2.38E-01	wt. %	Max of 2019 Monthly Dust Analyses	3.5E-06 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Fluoride (F)	1.18E+00	5.17E+00	5.90E-02	lb/ton	AP-42 Table 12.5.1-9 (04/09)	Not a listed HAP
Lead (Pb)	2.79E-02	1.22E-01	1.59E+00	wt. %	Max of 2019 Monthly Dust Analyses	0.00056 lb/ton AP-42 Table 12.5.1-7 (04/09)
Mercury (Hg)	3.50E-07	1.53E-06	2.00E-05	wt. %	2018 Dust Analysis (1 sample)	1.1E-04 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Manganese (Mn)	8.55E-02	3.74E-01	4.88E+00	wt. %	Max of 2019 Monthly Dust Analyses	3.0E-04 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Nickel (Ni)	4.20E-04	1.84E-03	2.40E-02	wt. %	Max of 2019 Monthly Dust Analyses	5.5E-05 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Zinc (Zn)	5.71E-01	2.50E+00	3.26E+01	wt. %	Max of 2019 Monthly Dust Analyses	Not a listed HAP

Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: West Baghouse CE008

Annual Processing Rate: 175,200 tons of steel produced
Hours of Operation: 8,760 hrs/yr of operation

Emission Units Controlled:

	EAF #1	EAF Canopy Hood
Emission Point ID:	S008 / F005	S008 / S006
Emission Unit ID:	EU006	EU008
SCC Code:	30300908	30300908
Year Installed:	1979	1989
Design Capacity:	20 tons/hr	40 tons/hr
Control Device:	CE008	CE008, CE006, CE007

Baghouse Dust Analysis Data

Month	% Zinc (Zn)	% Lead (Pb)	% Cadmium (Cd)	% Manganese (Mn)	% Chromium (Cr)	% Nickel (Ni)	% Arsenic (As)	% Mercury (Hg)
January	28.5	1.2	0.0390	4.9	0.238	0.0230	0.0005	0.0000
February	26.5	1.0	0.0140	4.5	0.199	0.0230	-	-
March	28.3	1.6	0.1280	4.5	0.221	0.0190	-	-
April	26.7	1.2	0.0490	4.6	0.211	0.0180	-	-
May	26.6	1.4	0.0530	4.7	0.226	0.0240	-	-
June	0.0	0.0	0.0000	0.0	0.000	0.0000	-	-
July	29.9	1.6	0.0590	4.4	0.214	0.0180	-	-
August	32.6	1.6	0.0600	4.2	0.192	0.0170	-	-
September	29.9	1.4	0.0540	4.0	0.199	0.0190	-	-
October	30.6	1.4	0.0550	4.1	0.194	0.0170	-	-
November	32.0	1.4	0.0570	3.8	0.185	0.0170	-	-
December	29.8	1.4	0.0520	3.6	0.173	0.0170	-	-
Average	**32.63**	**1.59**	**0.13**	**4.88**	**0.24**	**0.02**	**0.0005**	**0.0000**

1. Zn, Pb, Cd, Mn, Cr, Ni - Dust analysis performed on a monthly composite sample and results are presented in percent on a dry weight basis.
2. As - This is not analyzed monthly - all available 2019 data used to calculate annual average.
3. Hg - This is only analyzed once per year for TRI reporting purposes.

Particulate Emission Factor (Post-Melt Shop Canopy Upgrades - Completed in July 2010)

Source	Stack Test Data (gr/dscf)[1]			Baghouse Exhaust Rate (dscfm)[2]			Mass Emissions (lb/hr)			Average Test Result (lb/hr)
Test Run #	1	2	3	1	2	3	1	2	3	
West Baghouse CE008	0.00062	0.00063	0.00064	333,029	318,169	326,375	1.76	1.71	1.79	1.75

1. EPA Method 5 stack test performed on October 27 and 28, 2010 (filterable PM only).
2. Actual stack flow rate as measured during the stack test.

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Ladle Refurbishing

Processing Rate: 183,960 # bricks/yr
Brick Weight: 10 lbs/brick
Control Device: CE005 Building

Emission Point ID: F005
Emission Unit ID: EU009
SCC Code: 30300998

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})[1]	2.78E-04	1.22E-03	8.83E-03	lb/ton	AP-42- Section 13.2.4	Assumes 70% building capture/control. This methodology was used in the Title V application (March 2004).
Particulate Matter <10 microns (PM_{10FIL})[1]	1.32E-04	5.76E-04	4.18E-03	lb/ton	AP-42- Section 13.2.4	
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)[1]	1.99E-05	8.73E-05	6.32E-04	lb/ton	AP-42- Section 13.2.4	
Nitrogen Oxides (NO_X)	NA	NA				
Volatile Organic Compounds (VOC)	NA	NA				
Sulfur Dioxide (SO_2)	NA	NA				
Carbon Monoxide (CO)	NA	NA				
HAP:	NA	NA				

1. All PM is filterable only (this is a non-combustion process).
2. Fugitive emission factors are calculated using AP-42 Section 13.2.4 assuming one transfer

$$E = k(0.0032)\frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}}(lb/ton)$$

k =	0.74	PM - (AP-42, Section 13.2.4 (11/06), for Particle Size < 30 mm)
	0.35	PM_{10} - (AP-42, Section 13.2.4 (11/06), for Particle Size < 10 mm)
	0.053	$PM_{2.5}$ - (AP-42, Section 13.2.4 (11/06), for Particle Size < 2.5 mm)
Mean Wind Speed (mph): U =	6.52	40-yr average for Huntington, WV (from http://www.ncdc.noaa.gov/oa/climate/online/ccd/avgwind.html)
Refractory Moisture Content (%) =	1	per AP-42, Section 13.2.4, Table 13.2.4-1 (11/06)

Type of Material	PM Emission Factor (lb/ton)	PM_{10} Emission Factor (lb/ton)	$PM_{2.5}$ Emission Factor (lb/ton)
Refractory	0.00883	0.00418	0.00063

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Tundish Cleaning/Refurbishing

Refractory Processing Rate:	0.02	tons/hr	170.4	**Emission Point ID:**	F005
Hours of Operation:	8,760	hrs		**Emission Unit ID:**	EU010
Fuel Usage:	26	MMscf/yr		**SCC Code:**	30300998
Control Device:	CE005 Building				

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Refurbishing:						
Particulate Matter, Filterable (PM_{FIL})[1]	3.24E-03	0.01	0.53947	lb/ton	AP-42- Section 13.2.4	Assumes 70% building capture/control. This methodology was used in the Title V application (March 2004).
Particulate Matter <10 microns (PM_{10FIL})[1]	1.53E-03	0.01	0.25515	lb/ton	AP-42- Section 13.2.4	
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)[1]	2.32E-04	1.02E-03	0.03864	lb/ton	AP-42- Section 13.2.4	
Critieria from Gas Combustion:						
Particulate Matter, Filterable (PM_{FIL})	0.01	0.02	1.9	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
Particulate Matter <10 microns (PM_{10FIL})	0.01	0.02	1.9	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	0.01	0.02	1.9	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
Particulate Matter, Condensable (PM_{CON})	0.02	0.07	5.7	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
Nitrogen Oxides (NO_X)	0.29	1.29	100	lb/MMscf	AP-42 Table 1.4-1 (07/98)	
Volatile Organic Compounds (VOC)	0.02	0.07	5.5	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
Sulfur Dioxide (SO_2)	0.00	0.01	0.6	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
Carbon Monoxide (CO)	0.25	1.08	84	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
HAP:	5.55E-03	2.43E-02	(See Table Below)		AP-42 Tables 1.4-3 and 1.4-4 (07/98)	

Project Description: **Title V Operating Permit Renewal**
Date: **5/1/2020**

Process: **Tundish Cleaning/Refurbishing**

Refractory Processing Rate:	0.02	tons/hr	170.4	**Emission Point ID:**	F005
Hours of Operation:	8,760	hrs		**Emission Unit ID:**	**EU010**
Fuel Usage:	26	MMscf/yr		**SCC Code:**	30300998

1. All PM is filterable only (this is a non-combustion process).
2. Fugitive emission factors are calculated using AP-42 Section 13.2.4 assuming one transfer.

$$E = k(0.0032)\frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}}(lb/ton)$$

k =	0.74	PM - (AP-42, Section 13.2.4 (11/06), for Particle Size < 30 mm)
	0.35	PM_{10} - (AP-42, Section 13.2.4 (11/06), for Particle Size < 10 mm)
	0.053	$PM_{2.5}$ - (AP-42, Section 13.2.4 (11/06), for Particle Size < 2.5 mm)
Mean Wind Speed (mph): U =	6.52	40-yr average for Huntington, WV (from http://www.ncdc.noaa.gov/oa/climate/online/ccd/avgwind.html)
Refractory Moisture Content (%) =	1	per AP-42, Section 13.2.4, Table 13.2.4-1 (11/06)

Type of Material	PM Emission Factor (lb/ton)	PM_{10} Emission Factor (lb/ton)	$PM_{2.5}$ Emission Factor (lb/ton)
Refractory	0.53947	0.25515	0.03864

Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Tundish Cleaning/Refurbishing

Refractory Processing Rate:	0.02	tons/hr	170.4	**Emission Point ID:**	F005
Hours of Operation:	8,760	hrs		**Emission Unit ID:**	EU010
Fuel Usage:	26	MMscf/yr		**SCC Code:**	30300998

Natural Gas Combustion HAP Emissions[1]

Pollutant	CAS Number	(lb/MMscf)	Potential Emissions (lb/hr)	Potential Emissions (tpy)
Speciated Organics				
2-Methylnaphthalene	91-57-6	2.4E-05	7.1E-08	3.09E-07
3-Methylchloranthrene	56-49-5	1.8E-06	5.3E-09	2.32E-08
7,12-Dimethylbenz(a)anthracene	57-97-6	1.6E-05	4.7E-08	2.06E-07
Acenaphthene	83-32-9	1.8E-06	5.3E-09	2.32E-08
Acenaphthylene	203-96-8	1.8E-06	5.3E-09	2.32E-08
Anthracene	120-12-7	2.4E-06	7.1E-09	3.09E-08
Benz(a)anthracene	56-55-3	1.8E-06	5.3E-09	2.32E-08
Benzene	71-43-2	2.1E-03	6.2E-06	2.71E-05
Benzo(a)pyrene	50-32-8	1.2E-06	3.5E-09	1.55E-08
Benzo(b)fluoranthene	205-99-2	1.8E-06	5.3E-09	2.32E-08
Benzo(g,h,i)perylene	191-24-2	1.2E-06	3.5E-09	1.55E-08
Benzo(k)fluoranthene	205-82-3	1.8E-06	5.3E-09	2.32E-08
Chrysene	218-01-9	1.8E-06	5.3E-09	2.32E-08
Dibenzo(a,h) anthracene	53-70-3	1.2E-06	3.5E-09	1.55E-08
Dichlorobenzene	25321-22-6	1.2E-03	3.5E-06	1.55E-05
Fluoranthene	206-44-0	3.0E-06	8.8E-09	3.86E-08
Fluorene	86-73-7	2.8E-06	8.2E-09	3.61E-08
Formaldehyde	50-00-0	7.5E-02	2.2E-04	9.66E-04
Hexane	110-54-3	1.8E+00	5.3E-03	2.32E-02
Indo(1,2,3-cd)pyrene	193-39-5	1.8E-06	5.3E-09	2.32E-08
Napthalene	91-20-3	6.1E-04	1.8E-06	7.86E-06
Phenanthrene	85-01-8	1.7E-05	5.0E-08	2.19E-07
Pyrene	129-00-0	5.0E-06	1.5E-08	6.44E-08
Toluene	108-88-3	3.4E-03	1.0E-05	4.38E-05
Metals				
Arsenic	7440-38-2	2.0E-04	5.9E-07	2.58E-06
Beryllium	7440-41-7	1.2E-05	3.5E-08	1.55E-07
Cadmium	7440-43-9	1.1E-03	3.2E-06	1.42E-05
Chromium	7440-47-3	1.4E-03	4.1E-06	1.80E-05
Cobalt	7440-48-4	8.4E-05	2.5E-07	1.08E-06
Lead	7439-92-1	5.0E-04	1.5E-06	6.44E-06
Manganese	7439-96-5	3.8E-04	1.1E-06	4.90E-06
Mercury	7439-97-6	2.6E-04	7.6E-07	3.35E-06
Nickel	7440-02-0	2.1E-03	6.2E-06	2.71E-05
Selenium	7782-49-2	2.4E-05	7.1E-08	3.09E-07
Total HAP			**5.6E-03**	**2.43E-02**
Non-HAP Metals				
Barium	7440-39-3	4.4E-03	1.3E-05	5.67E-05
Copper	7440-50-8	8.50E-04	2.5E-06	1.10E-05
Molybdenum	7439-98-7	1.10E-03	3.2E-06	1.42E-05
Vanadium	7440-62-2	2.30E-03	6.8E-06	2.96E-05
Zinc	7440-66-6	2.90E-02	8.5E-05	3.74E-04

1. Emission factors obtained from AP-42 Section 1.4 Natural Gas Fired External Combustion Sources (07/98).

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Slag Handling

Annual Processing Rate: 350,400 tons of slag

Emission Point ID: F005
Emission Unit ID: EU011
SCC Code: 30300998
Year Installed: 1950
Design Capacity: 40 tons/hr

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})[1]	1.04	4.56	0.026	lb/ton	AP-42, Section 12.5-4 (01/95)	assumes one transfer, fugitive emissions
Particulate Matter <10 microns (PM_{10FIL})[1]	0.52	2.28	0.013	lb/ton	AP-42, Section 12.5-4 (01/95)	assumes one transfer, fugitive emissions
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)[1]	0.18	0.81	0.0046	lb/ton	AP-42, Section 12.5-4 (01/95)	assumes one transfer, fugitive emissions
Nitrogen Oxides (NO_X)	NA	NA				
Volatile Organic Compounds (VOC)	NA	NA				
Sulfur Dioxide (SO_2)	NA	NA				
Carbon Monoxide (CO)	NA	NA				
HAP:	NA	NA				

1. All PM is filterable only (this is a non-combustion process)

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Continuous Caster

Hours of Operation: 8760 hrs/yr
Processing Rate: 350,400 tons poured
Control Device: CE005

Emission Point ID: F005
Emission Unit ID: EU012
SCC Code: 30300922
Year Installed: 1975
Design Capacity: 40.5 tons/hr

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	1.44	6.31	1.20E-01	lb/ton	AP-42, Table 12.5.1-8 (04/09)	Assumes 70% building capture and control (consistent with T-V Application March 2004).
Particulate Matter <10 microns (PM_{10FIL})	1.09	4.79	9.12E-02	lb/ton	76% of total PM is PM_{10} - AP-42 Table 12.5-2 (01/95)	Assumes 70% building capture and control (consistent with T-V Application March 2004).
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	1.07	4.67	8.88E-02	lb/ton	74% of total PM is $PM_{2.5}$ - AP-42 Table 12.5-2 (01/95)	Assumes 70% building capture and control (consistent with T-V Application March 2004).
Particulate Matter, Condensable (PM_{CON})	0.15	0.65	0.01	lb/ton	Ratio of baghouse PMCON to PMFIL	
Nitrogen Oxides (NO_X)	NA	NA				
Volatile Organic Compounds (VOC)	NA	NA				
Sulfur Dioxide (SO_2)	NA	NA				
Carbon Monoxide (CO)	NA	NA				
HAP:	N/A	N/A				

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Caster Cutoff Torches

Hours of Operation:	8760	hrs/yr		**Emission Point ID:**	F005
Processing Rate:	350,400	tons		**Emission Unit ID:**	EU013
Fuel Usage:	1.72	MMscf/yr	0.72	**SCC Code:**	30390003
Control Device:	CE005			**Year Installed:**	1975
				Design Capacity:	40.5 tons/hr

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	1.28	5.61	0.032	lb/ton	AP-42 Table 12.5.1-1 (04/09)	Factor for NG fired billet cutting torches
Particulate Matter <10 microns (PM_{10FIL})	1.28	5.61	0.032	lb/ton	AP-42 Table 12.5.1-1 (04/09)	Factor for NG fired billet cutting torches
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	1.28	5.61	0.032	lb/ton	AP-42 Table 12.5.1-1 (04/09)	Factor for NG fired billet cutting torches
Particulate Matter, Condensable (PM_{CON})	0.001	0.005	5.7	lb/MMscf	AP-42 Table 1.4-1 (07/98)	Factor for NG combustion (small boilers)
Nitrogen Oxides (NO_X)	0.02	0.09	100	lb/MMscf	AP-42 Table 1.4-1 (07/98)	Factor for NG combustion (small boilers)
Volatile Organic Compounds (VOC)	1.1E-03	4.7E-03	5.5	lb/MMscf	AP-42 Table 1.4-1 (07/98)	Factor for NG combustion (small boilers)
Sulfur Dioxide (SO_2)	1.2E-04	5.2E-04	0.6	lb/MMscf	AP-42 Table 1.4-2 (07/98)	Factor for NG combustion (small boilers)
Carbon Monoxide (CO)	0.016	0.072	84	lb/MMscf	AP-42 Table 1.4-2 (07/98)	Factor for NG combustion (small boilers)
HAP:	3.70E-04	1.62E-03	(See Table Below)		AP-42 Tables 1.4-3 and 1.4-4 (07/98)	

Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Caster Cutoff Torches

Hours of Operation:	8760	hrs/yr		**Emission Point ID:**	F005
Processing Rate:	350,400	tons		**Emission Unit ID:**	EU013
Fuel Usage:	1.72	MMscf/yr	0.72	**SCC Code:**	30390003

Natural Gas Combustion HAP Emissions[1]

Pollutant	CAS Number	(lb/MMscf)	Potential Emissions (lb/hr)	Potential Emissions (tpy)
Speciated Organics				
2-Methylnaphthalene	91-57-6	2.4E-05	4.7E-09	2.06E-08
3-Methylchloranthrene	56-49-5	1.8E-06	3.5E-10	1.55E-09
7,12-Dimethylbenz(a)anthracene	57-97-6	1.6E-05	3.1E-09	1.37E-08
Acenaphthene	83-32-9	1.8E-06	3.5E-10	1.55E-09
Acenaphthylene	203-96-8	1.8E-06	3.5E-10	1.55E-09
Anthracene	120-12-7	2.4E-06	4.7E-10	2.06E-09
Benz(a)anthracene	56-55-3	1.8E-06	3.5E-10	1.55E-09
Benzene	71-43-2	2.1E-03	4.1E-07	1.80E-06
Benzo(a)pyrene	50-32-8	1.2E-06	2.4E-10	1.03E-09
Benzo(b)fluoranthene	205-99-2	1.8E-06	3.5E-10	1.55E-09
Benzo(g,h,i)perylene	191-24-2	1.2E-06	2.4E-10	1.03E-09
Benzo(k)fluoranthene	205-82-3	1.8E-06	3.5E-10	1.55E-09
Chrysene	218-01-9	1.8E-06	3.5E-10	1.55E-09
Dibenzo(a,h) anthracene	53-70-3	1.2E-06	2.4E-10	1.03E-09
Dichlorobenzene	25321-22-6	1.2E-03	2.4E-07	1.03E-06
Fluoranthene	206-44-0	3.0E-06	5.9E-10	2.58E-09
Fluorene	86-73-7	2.8E-06	5.5E-10	2.40E-09
Formaldehyde	50-00-0	7.5E-02	1.5E-05	6.44E-05
Hexane	110-54-3	1.8E+00	3.5E-04	1.55E-03
Indo(1,2,3-cd)pyrene	193-39-5	1.8E-06	3.5E-10	1.55E-09
Napthalene	91-20-3	6.1E-04	1.2E-07	5.24E-07
Phenanthrene	85-01-8	1.7E-05	3.3E-09	1.46E-08
Pyrene	129-00-0	5.0E-06	9.8E-10	4.29E-09
Toluene	108-88-3	3.4E-03	6.7E-07	2.92E-06
Metals				
Arsenic	7440-38-2	2.0E-04	3.9E-08	1.72E-07
Beryllium	7440-41-7	1.2E-05	2.4E-09	1.03E-08
Cadmium	7440-43-9	1.1E-03	2.2E-07	9.45E-07
Chromium	7440-47-3	1.4E-03	2.7E-07	1.20E-06
Cobalt	7440-48-4	8.4E-05	1.6E-08	7.21E-08
Lead	7439-92-1	5.0E-04	9.8E-08	4.29E-07
Manganese	7439-96-5	3.8E-04	7.5E-08	3.26E-07
Mercury	7439-97-6	2.6E-04	5.1E-08	2.23E-07
Nickel	7440-02-0	2.1E-03	4.1E-07	1.80E-06
Selenium	7782-49-2	2.4E-05	4.7E-09	2.06E-08
Total HAP			**3.7E-04**	**1.62E-03**
Non-HAP Metals				
Barium	7440-39-3	4.4E-03	8.6E-07	3.78E-06
Copper	7440-50-8	8.50E-04	1.7E-07	7.30E-07
Molybdenum	7439-98-7	1.10E-03	2.2E-07	9.45E-07
Vanadium	7440-62-2	2.30E-03	4.5E-07	1.98E-06
Zinc	7440-66-6	2.90E-02	5.7E-06	2.49E-05

1. Emission factors obtained from AP-42 Section 1.4 Natural Gas Fired External Combustion Sources (07/98).

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: #1 Reheat Furnace

Hours of Operation:	8760	hrs/yr	**Emission Point ID:**	S014
Processing Rate:	350,400	tons	**Emission Unit ID:**	EU014
Fuel Usage:	824	MMscf/yr	**SCC Code:**	30300933
Control Device:	None		**Year Installed:**	1975
			Design Capacity:	96 MMBtu/hr

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	0.14	0.61	0.0035	lb/MMBtu	AP-42 Table 12.5.1-1 (04/09)	
Particulate Matter <10 microns (PM_{10FIL})	0.14	0.61	0.0035	lb/MMBtu	AP-42 Table 12.5.1-1 (04/09)	Assumes equivalent to PM
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	0.14	0.61	0.0035	lb/MMBtu	AP-42 Table 12.5.1-1 (04/09)	Assumes equivalent to PM
Particulate Matter, Condensable (PM_{CON})	0.37	1.63	0.0093	lb/MMBtu	AP-42 Table 12.5.1-2 (04/09)	
Nitrogen Oxides (NO_X)	18.24	79.89	0.19	lb/MMBtu	AP-42 Table 12.5.1-4 (04/09)	
Volatile Organic Compounds (VOC)	0.03	0.13	0.0003	lb/MMBtu	AP-42 Table 12.5.1-8 (04/09)	
Sulfur Dioxide (SO_2)	0.06	0.25	0.6	lb/MMscf	AP-42 Table 1.4-2	No factors in AP-42 Ch. 12.5.1
Carbon Monoxide (CO)	0.12	0.55	0.0013	lb/MMBtu	AP-42 Table 12.5.1-5 (04/09)	
HAP:	1.78E-01	7.78E-01	(See Table Below)		AP-42 Tables 1.4-3 and 1.4-4 (07/98)	

Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: #1 Reheat Furnace

Hours of Operation:	8760	hrs/yr	**Emission Point ID:**	S014
Processing Rate:	350,400	tons	**Emission Unit ID:**	EU014
Fuel Usage:	824	MMscf/yr	**SCC Code:**	30300933

Natural Gas Combustion HAP Emissions[1]

Pollutant	CAS Number	(lb/MMscf)	Potential Emissions (lb/hr)	Potential Emissions (tpy)
Speciated Organics				
2-Methylnaphthalene	91-57-6	2.4E-05	2.3E-06	9.89E-06
3-Methylchloranthrene	56-49-5	1.8E-06	1.7E-07	7.42E-07
7,12-Dimethylbenz(a)anthracene	57-97-6	1.6E-05	1.5E-06	6.60E-06
Acenaphthene	83-32-9	1.8E-06	1.7E-07	7.42E-07
Acenaphthylene	203-96-8	1.8E-06	1.7E-07	7.42E-07
Anthracene	120-12-7	2.4E-06	2.3E-07	9.89E-07
Benz(a)anthracene	56-55-3	1.8E-06	1.7E-07	7.42E-07
Benzene	71-43-2	2.1E-03	2.0E-04	8.66E-04
Benzo(a)pyrene	50-32-8	1.2E-06	1.1E-07	4.95E-07
Benzo(b)fluoranthene	205-99-2	1.8E-06	1.7E-07	7.42E-07
Benzo(g,h,i)perylene	191-24-2	1.2E-06	1.1E-07	4.95E-07
Benzo(k)fluoranthene	205-82-3	1.8E-06	1.7E-07	7.42E-07
Chrysene	218-01-9	1.8E-06	1.7E-07	7.42E-07
Dibenzo(a,h) anthracene	53-70-3	1.2E-06	1.1E-07	4.95E-07
Dichlorobenzene	25321-22-6	1.2E-03	1.1E-04	4.95E-04
Fluoranthene	206-44-0	3.0E-06	2.8E-07	1.24E-06
Fluorene	86-73-7	2.8E-06	2.6E-07	1.15E-06
Formaldehyde	50-00-0	7.5E-02	7.1E-03	3.09E-02
Hexane	110-54-3	1.8E+00	1.7E-01	7.42E-01
Indo(1,2,3-cd)pyrene	193-39-5	1.8E-06	1.7E-07	7.42E-07
Napthalene	91-20-3	6.1E-04	5.7E-05	2.51E-04
Phenanthrene	85-01-8	1.7E-05	1.6E-06	7.01E-06
Pyrene	129-00-0	5.0E-06	4.7E-07	2.06E-06
Toluene	108-88-3	3.4E-03	3.2E-04	1.40E-03
Metals				
Arsenic	7440-38-2	2.0E-04	1.9E-05	8.24E-05
Beryllium	7440-41-7	1.2E-05	1.1E-06	4.95E-06
Cadmium	7440-43-9	1.1E-03	1.0E-04	4.53E-04
Chromium	7440-47-3	1.4E-03	1.3E-04	5.77E-04
Cobalt	7440-48-4	8.4E-05	7.9E-06	3.46E-05
Lead	7439-92-1	5.0E-04	4.7E-05	2.06E-04
Manganese	7439-96-5	3.8E-04	3.6E-05	1.57E-04
Mercury	7439-97-6	2.6E-04	2.4E-05	1.07E-04
Nickel	7440-02-0	2.1E-03	2.0E-04	8.66E-04
Selenium	7782-49-2	2.4E-05	2.3E-06	9.89E-06
Total HAP			**1.8E-01**	**7.78E-01**
Non-HAP Metals				
Barium	7440-39-3	4.4E-03	4.1E-04	1.81E-03
Copper	7440-50-8	8.50E-04	8.00E-05	3.50E-04
Molybdenum	7439-98-7	1.10E-03	1.04E-04	4.53E-04
Vanadium	7440-62-2	2.30E-03	2.16E-04	9.48E-04
Zinc	7440-66-6	2.90E-02	2.73E-03	1.20E-02

1. Emission factors obtained from AP-42 Section 1.4 Natural Gas Fired External Combustion Sources (07/98).

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Hot Rolling Mill #1

Hours of Operation: 8760 hrs/yr
Processing Rate: 350,400 tons
Control Device: CE015

Emission Point ID: F015
Emission Unit ID: EU015
SCC Code: 30300933
Year Installed: 1985
Design Capacity: 40 tons/hr

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})[1]	0.77	3.36	0.064	lb/ton	Site-specific emission factor from Title V Application (3/1/2004)	Assumes 20% of mill scale generated becomes airborne; assumes 70% building capture/control
Particulate Matter <10 microns (PM_{10FIL})[1]	0.77	3.36	0.064	lb/ton	Site-specific emission factor from Title V Application (3/1/2004)	Assumes equivalent to PM
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)[1]	0.77	3.36	0.064	lb/ton	Site-specific emission factor from Title V Application (3/1/2004)	Assumes equivalent to PM
Nitrogen Oxides (NO_x)	NA	NA				
Volatile Organic Compounds (VOC)	NA	NA				
Sulfur Dioxide (SO_2)	NA	NA				
Carbon Monoxide (CO)	NA	NA				
HAP:	NA	NA				

1. All PM is filterable only (this is a non-combustion process).

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: #2 Reheat Furnace

Hours of Operation:	8760	hrs/yr	**Emission Point ID:**	S016
Processing Rate:	322,368	tons	**Emission Unit ID:**	EU016
Fuel Usage:	1,116	MMscf/yr	**SCC Code:**	30300933
Control Device:	None		**Year Installed:**	1997
			Design Capacity:	130 MMBtu/hr

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	0.46	1.99	0.0035	lb/MMBtu	AP-42 Table 12.5.1-1 (04/09)	
Particulate Matter <10 microns (PM_{10FIL})	0.46	1.99	0.0035	lb/MMBtu	AP-42 Table 12.5.1-1 (04/09)	Assumes equivalent to PM
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	0.46	1.99	0.0035	lb/MMBtu	AP-42 Table 12.5.1-1 (04/09)	Assumes equivalent to PM
Particulate Matter, Condensable (PM_{CON})	1.21	5.30	0.0093	lb/MMBtu	AP-42 Table 12.5.1-2 (04/09)	
Nitrogen Oxides (NO_X)	24.70	108.19	0.19	lb/MMBtu	AP-42 Table 12.5.1-4 (04/09)	
Volatile Organic Compounds (VOC)	0.04	0.17	0.0003	lb/MMBtu	AP-42 Table 12.5.1-8 (04/09)	
Sulfur Dioxide (SO_2)	0.08	0.33	0.6	lb/MMscf	AP-42 Table 1.4-2	No factors in AP-42 Ch. 12.5.1
Carbon Monoxide (CO)	0.17	0.74	0.0013	lb/MMBtu	AP-42 Table 12.5.1-5 (04/09)	
HAP:	2.41E-01	1.05E+00	(See Table Below)		AP-42 Tables 1.4-3 and 1.4-4 (07/98)	

1. PM primary is total particulate matter (filterable + condensable). Both PM primary and PM filterable should be reported for each fraction (PM, PM10, and PM2.5).

Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: #2 Reheat Furnace

Hours of Operation:	8760	hrs/yr	**Emission Point ID:**	S016
Processing Rate:	322,368	tons	**Emission Unit ID:**	EU016
Fuel Usage:	1,116	MMscf/yr	**SCC Code:**	30300933

Natural Gas Combustion HAP Emissions[1]

Pollutant	CAS Number	(lb/MMscf)	Potential Emissions (lb/hr)	Potential Emissions (tpy)
Speciated Organics				
2-Methylnaphthalene	91-57-6	2.4E-05	3.1E-06	1.34E-05
3-Methylchloranthrene	56-49-5	1.8E-06	2.3E-07	1.00E-06
7,12-Dimethylbenz(a)anthracene	57-97-6	1.6E-05	2.0E-06	8.93E-06
Acenaphthene	83-32-9	1.8E-06	2.3E-07	1.00E-06
Acenaphthylene	203-96-8	1.8E-06	2.3E-07	1.00E-06
Anthracene	120-12-7	2.4E-06	3.1E-07	1.34E-06
Benz(a)anthracene	56-55-3	1.8E-06	2.3E-07	1.00E-06
Benzene	71-43-2	2.1E-03	2.7E-04	1.17E-03
Benzo(a)pyrene	50-32-8	1.2E-06	1.5E-07	6.70E-07
Benzo(b)fluoranthene	205-99-2	1.8E-06	2.3E-07	1.00E-06
Benzo(g,h,i)perylene	191-24-2	1.2E-06	1.5E-07	6.70E-07
Benzo(k)fluoranthene	205-82-3	1.8E-06	2.3E-07	1.00E-06
Chrysene	218-01-9	1.8E-06	2.3E-07	1.00E-06
Dibenzo(a,h) anthracene	53-70-3	1.2E-06	1.5E-07	6.70E-07
Dichlorobenzene	25321-22-6	1.2E-03	1.5E-04	6.70E-04
Fluoranthene	206-44-0	3.0E-06	3.8E-07	1.67E-06
Fluorene	86-73-7	2.8E-06	3.6E-07	1.56E-06
Formaldehyde	50-00-0	7.5E-02	9.6E-03	4.19E-02
Hexane	110-54-3	1.8E+00	2.3E-01	1.00E+00
Indo(1,2,3-cd)pyrene	193-39-5	1.8E-06	2.3E-07	1.00E-06
Napthalene	91-20-3	6.1E-04	7.8E-05	3.41E-04
Phenanthrene	85-01-8	1.7E-05	2.2E-06	9.49E-06
Pyrene	129-00-0	5.0E-06	6.4E-07	2.79E-06
Toluene	108-88-3	3.4E-03	4.3E-04	1.90E-03
Metals				
Arsenic	7440-38-2	2.0E-04	2.5E-05	1.12E-04
Beryllium	7440-41-7	1.2E-05	1.5E-06	6.70E-06
Cadmium	7440-43-9	1.1E-03	1.4E-04	6.14E-04
Chromium	7440-47-3	1.4E-03	1.8E-04	7.82E-04
Cobalt	7440-48-4	8.4E-05	1.1E-05	4.69E-05
Lead	7439-92-1	5.0E-04	6.4E-05	2.79E-04
Manganese	7439-96-5	3.8E-04	4.8E-05	2.12E-04
Mercury	7439-97-6	2.6E-04	3.3E-05	1.45E-04
Nickel	7440-02-0	2.1E-03	2.7E-04	1.17E-03
Selenium	7782-49-2	2.4E-05	3.1E-06	1.34E-05
Total HAP			**2.4E-01**	**1.05E+00**
Non-HAP Metals				
Barium	7440-39-3	4.4E-03	5.6E-04	2.46E-03
Copper	7440-50-8	8.50E-04	1.1E-04	4.75E-04
Molybdenum	7439-98-7	1.10E-03	1.4E-04	6.14E-04
Vanadium	7440-62-2	2.30E-03	2.9E-04	1.28E-03
Zinc	7440-66-6	2.90E-02	3.7E-03	1.62E-02

1. Emission factors obtained from AP-42 Section 1.4 Natural Gas Fired External Combustion Sources (07/98).

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Hot Rolling Mill #2

Hours of Operation: 8760 hrs/yr
Processing Rate: 322,368 tons/yr
Control Device: CE017

Emission Point ID: F017
Emission Unit ID: EU017
SCC Code: 30300933
Year Installed: 1994
Design Capacity: 36.8 tons/hr

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})[1]	0.71	3.09	0.064	lb/ton	Site-specific emission factor from Title V Application (3/1/2004)	Assumes 20% of mill scale generated becomes airborne; assumes 70% building capture/control
Particulate Matter <10 microns (PM_{10FIL})[1]	0.71	3.09	0.064	lb/ton	Site-specific emission factor from Title V Application (3/1/2004)	Assumes equivalent to PM
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)[1]	0.71	3.09	0.064	lb/ton	Site-specific emission factor from Title V Application (3/1/2004)	Assumes equivalent to PM
Nitrogen Oxides (NO_X)	NA	NA				
Volatile Organic Compounds (VOC)	NA	NA				
Sulfur Dioxide (SO_2)	NA	NA				
Carbon Monoxide (CO)	NA	NA				
HAP:	NA	NA				

1. All PM is filterable only (this is a non-combustion process).

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Paint Application

Paint Usage: 62,500 gallons/yr
Control Device: None

SSC: 40202599
Emission Point ID: F020
Emission Unit ID: EU020
Year Installed: 1997
Design Capacity: 20 gal/hr

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source
Critieria:					
Particulate Matter, Filterable (PM_{FIL})	NA	NA			
Particulate Matter <10 microns (PM_{10FIL})	NA	NA			
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	NA	NA			
Nitrogen Oxides (NO_X)	NA	NA			
Volatile Organic Compounds (VOC)	0.57	2.50	0.08	lb/gal	SDS for Low VOC Waterborne Black Primer from Farrell-Calhoun dated 1/9/2018
Sulfur Dioxide (SO_2)	NA	NA			
Carbon Monoxide (CO)	NA	NA			
Lead (Pb)	NA	NA			
HAP:					
None	NA	NA			

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Paint Drying Oven

Hours of Operation: 8760 hrs/yr
Rated Capacity: 4 MMBtu/hr
Fuel Usage: 34 MMscf/yr

Emission Point ID: S021
Emission Unit ID: EU021
SCC Code: 30300933

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	0.01	0.03	1.9	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
Particulate Matter <10 microns (PM_{10FIL})	0.01	0.03	1.9	lb/MMscf	AP-42 Table 1.4-2 (07/98)	Assumes equivalent to PM
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	0.01	0.03	1.9	lb/MMscf	AP-42 Table 1.4-2 (07/98)	Assumes equivalent to PM
Particulate Matter, Condensable (PM_{CON})	0.02	0.10	5.7	lb/MMscf	AP-42 Table 1.4-1 (07/98)	Factor for NG combustion (small boilers)
Nitrogen Oxides (NO_x)	0.39	1.72	100	lb/MMscf	AP-42 Table 1.4-1 (07/98)	Factor for NG combustion (small boilers)
Volatile Organic Compounds (VOC)	0.02	0.09	5.5	lb/MMscf	AP-42 Table 1.4-1 (07/98)	Factor for NG combustion (small boilers)
Sulfur Dioxide (SO_2)	0.002	0.01	0.6	lb/MMscf	AP-42 Table 1.4-2 (07/98)	Factor for NG combustion (small boilers)
Carbon Monoxide (CO)	0.33	1.44	84	lb/MMscf	AP-42 Table 1.4-2 (07/98)	Factor for NG combustion (small boilers)
HAP:	7.41E-03	3.24E-02	(See Table Below)		AP-42 Tables 1.4-3 and 1.4-4 (07/98)	

Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Paint Drying Oven

Hours of Operation:	8760	hrs/yr	**Emission Point ID:**	S021
Rated Capacity:	4	MMBtu/hr	**Emission Unit ID:**	EU021
Fuel Usage:	34	MMscf/yr	**SCC Code:**	30300933

Natural Gas Combustion HAP Emissions[1]

Pollutant	CAS Number	(lb/MMscf)	Potential Emissions (lb/hr)	Potential Emissions (tpy)
Speciated Organics				
2-Methylnaphthalene	91-57-6	2.4E-05	9.4E-08	4.12E-07
3-Methylchloranthrene	56-49-5	1.8E-06	7.1E-09	3.09E-08
7,12-Dimethylbenz(a)anthracene	57-97-6	1.6E-05	6.3E-08	2.75E-07
Acenaphthene	83-32-9	1.8E-06	7.1E-09	3.09E-08
Acenaphthylene	203-96-8	1.8E-06	7.1E-09	3.09E-08
Anthracene	120-12-7	2.4E-06	9.4E-09	4.12E-08
Benz(a)anthracene	56-55-3	1.8E-06	7.1E-09	3.09E-08
Benzene	71-43-2	2.1E-03	8.2E-06	3.61E-05
Benzo(a)pyrene	50-32-8	1.2E-06	4.7E-09	2.06E-08
Benzo(b)fluoranthene	205-99-2	1.8E-06	7.1E-09	3.09E-08
Benzo(g,h,i)perylene	191-24-2	1.2E-06	4.7E-09	2.06E-08
Benzo(k)fluoranthene	205-82-3	1.8E-06	7.1E-09	3.09E-08
Chrysene	218-01-9	1.8E-06	7.1E-09	3.09E-08
Dibenzo(a,h) anthracene	53-70-3	1.2E-06	4.7E-09	2.06E-08
Dichlorobenzene	25321-22-6	1.2E-03	4.7E-06	2.06E-05
Fluoranthene	206-44-0	3.0E-06	1.2E-08	5.15E-08
Fluorene	86-73-7	2.8E-06	1.1E-08	4.81E-08
Formaldehyde	50-00-0	7.5E-02	2.9E-04	1.29E-03
Hexane	110-54-3	1.8E+00	7.1E-03	3.09E-02
Indo(1,2,3-cd)pyrene	193-39-5	1.8E-06	7.1E-09	3.09E-08
Napthalene	91-20-3	6.1E-04	2.4E-06	1.05E-05
Phenanthrene	85-01-8	1.7E-05	6.7E-08	2.92E-07
Pyrene	129-00-0	5.0E-06	2.0E-08	8.59E-08
Toluene	108-88-3	3.4E-03	1.3E-05	5.84E-05
Metals				
Arsenic	7440-38-2	2.0E-04	7.8E-07	3.44E-06
Beryllium	7440-41-7	1.2E-05	4.7E-08	2.06E-07
Cadmium	7440-43-9	1.1E-03	4.3E-06	1.89E-05
Chromium	7440-47-3	1.4E-03	5.5E-06	2.40E-05
Cobalt	7440-48-4	8.4E-05	3.3E-07	1.44E-06
Lead	7439-92-1	5.0E-04	2.0E-06	8.59E-06
Manganese	7439-96-5	3.8E-04	1.5E-06	6.53E-06
Mercury	7439-97-6	2.6E-04	1.0E-06	4.47E-06
Nickel	7440-02-0	2.1E-03	8.2E-06	3.61E-05
Selenium	7782-49-2	2.4E-05	9.4E-08	4.12E-07
Total HAP			**7.4E-03**	**3.24E-02**
Non-HAP Metals				
Barium	7440-39-3	4.4E-03	1.7E-05	7.56E-05
Copper	7440-50-8	8.50E-04	3.3E-06	1.46E-05
Molybdenum	7439-98-7	1.10E-03	4.3E-06	1.89E-05
Vanadium	7440-62-2	2.30E-03	9.0E-06	3.95E-05
Zinc	7440-66-6	2.90E-02	1.1E-04	4.98E-04

1. Emission factors obtained from AP-42 Section 1.4 Natural Gas Fired External Combustion Sources (07/98).

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Continuous Wax Line Heater

Hours of Operation:	8760	hrs/yr	**Emission Point ID:**	S022
Rated Capacity:	4.0	MMBtu/hr	**Emission Unit ID:**	EU022
Fuel Usage:	34.4	MMscf/yr	**SCC Code:**	30300998
Control Device:	None		**Year Installed:**	1997
			Design Capacity:	4 MMBtu/hr

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	0.01	0.03	1.9	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
Particulate Matter <10 microns (PM_{10FIL})	0.01	0.03	1.9	lb/MMscf	AP-42 Table 1.4-2 (07/98)	assumes equivalent to PM
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	0.01	0.03	1.9	lb/MMscf	AP-42 Table 1.4-2 (07/98)	assumes equivalent to PM
Particulate Matter, Condensable (PM_{CON})	0.02	0.10	5.7	lb/MMscf	AP-42 Table 1.4-1 (07/98)	Factor for NG combustion (small boilers)
Nitrogen Oxides (NO_X)	0.39	1.72	100	lb/MMscf	AP-42 Table 1.4-1 (07/98)	Factor for NG combustion (small boilers)
Volatile Organic Compounds (VOC)	0.02	0.09	5.5	lb/MMscf	AP-42 Table 1.4-1 (07/98)	Factor for NG combustion (small boilers)
Sulfur Dioxide (SO_2)	0.002	0.01	0.6	lb/MMscf	AP-42 Table 1.4-2 (07/98)	Factor for NG combustion (small boilers)
Carbon Monoxide (CO)	0.33	1.44	84	lb/MMscf	AP-42 Table 1.4-2 (07/98)	Factor for NG combustion (small boilers)
HAP:	7.41E-03	3.24E-02	(See Table Below)		AP-42 Tables 1.4-3 and 1.4-4 (07/98)	

Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Continuous Wax Line Heater

Hours of Operation:	8760	hrs/yr	**Emission Point ID:**	S022
Rated Capacity:	4.0	MMBtu/hr	**Emission Unit ID:**	EU022
Fuel Usage:	34.4	MMscf/yr	**SCC Code:**	30300998

Natural Gas Combustion HAP Emissions[1]

Pollutant	CAS Number	(lb/MMscf)	Potential Emissions (lb/hr)	Potential Emissions (tpy)
Speciated Organics				
2-Methylnaphthalene	91-57-6	2.4E-05	9.4E-08	4.12E-07
3-Methylchloranthrene	56-49-5	1.8E-06	7.1E-09	3.09E-08
7,12-Dimethylbenz(a)anthracene	57-97-6	1.6E-05	6.3E-08	2.75E-07
Acenaphthene	83-32-9	1.8E-06	7.1E-09	3.09E-08
Acenaphthylene	203-96-8	1.8E-06	7.1E-09	3.09E-08
Anthracene	120-12-7	2.4E-06	9.4E-09	4.12E-08
Benz(a)anthracene	56-55-3	1.8E-06	7.1E-09	3.09E-08
Benzene	71-43-2	2.1E-03	8.2E-06	3.61E-05
Benzo(a)pyrene	50-32-8	1.2E-06	4.7E-09	2.06E-08
Benzo(b)fluoranthene	205-99-2	1.8E-06	7.1E-09	3.09E-08
Benzo(g,h,i)perylene	191-24-2	1.2E-06	4.7E-09	2.06E-08
Benzo(k)fluoranthene	205-82-3	1.8E-06	7.1E-09	3.09E-08
Chrysene	218-01-9	1.8E-06	7.1E-09	3.09E-08
Dibenzo(a,h) anthracene	53-70-3	1.2E-06	4.7E-09	2.06E-08
Dichlorobenzene	25321-22-6	1.2E-03	4.7E-06	2.06E-05
Fluoranthene	206-44-0	3.0E-06	1.2E-08	5.15E-08
Fluorene	86-73-7	2.8E-06	1.1E-08	4.81E-08
Formaldehyde	50-00-0	7.5E-02	2.9E-04	1.29E-03
Hexane	110-54-3	1.8E+00	7.1E-03	3.09E-02
Indo(1,2,3-cd)pyrene	193-39-5	1.8E-06	7.1E-09	3.09E-08
Napthalene	91-20-3	6.1E-04	2.4E-06	1.05E-05
Phenanthrene	85-01-8	1.7E-05	6.7E-08	2.92E-07
Pyrene	129-00-0	5.0E-06	2.0E-08	8.59E-08
Toluene	108-88-3	3.4E-03	1.3E-05	5.84E-05
Metals				
Arsenic	7440-38-2	2.0E-04	7.8E-07	3.44E-06
Beryllium	7440-41-7	1.2E-05	4.7E-08	2.06E-07
Cadmium	7440-43-9	1.1E-03	4.3E-06	1.89E-05
Chromium	7440-47-3	1.4E-03	5.5E-06	2.40E-05
Cobalt	7440-48-4	8.4E-05	3.3E-07	1.44E-06
Lead	7439-92-1	5.0E-04	2.0E-06	8.59E-06
Manganese	7439-96-5	3.8E-04	1.5E-06	6.53E-06
Mercury	7439-97-6	2.6E-04	1.0E-06	4.47E-06
Nickel	7440-02-0	2.1E-03	8.2E-06	3.61E-05
Selenium	7782-49-2	2.4E-05	9.4E-08	4.12E-07
Total HAP			**7.4E-03**	**3.24E-02**
Non-HAP Metals			0.0E+00	
Barium	7440-39-3	4.4E-03	1.7E-05	7.56E-05
Copper	7440-50-8	8.50E-04	3.3E-06	1.46E-05
Molybdenum	7439-98-7	1.10E-03	4.3E-06	1.89E-05
Vanadium	7440-62-2	2.30E-03	9.0E-06	3.95E-05
Zinc	7440-66-6	2.90E-02	1.1E-04	4.98E-04

1. Emission factors obtained from AP-42 Section 1.4 Natural Gas Fired External Combustion Sources (07/98).

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Wax Application - Dip Tanks & Torrid Line

Wax Usage: 287,500 gallons
Control Device: None

SCC: 30300998
Emission Point ID: F023a,b
Emission Unit ID: EU023
Year Installed: 1997
Design Capacity: 33 gal/hr

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Critieria:						
Particulate Matter, Filterable (PM_{FIL})	NA	NA				
Particulate Matter <10 microns (PM_{10FIL})	NA	NA				
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	NA	NA				
Nitrogen Oxides (NO_X)	NA	NA				
Volatile Organic Compounds (VOC)	3.28	14.38	0.1	lb/gal	MSDS Non-Rust 1210; Daughbert Chemical Company; dated 2/19/03	Assumes all VOC is lost thru evaporation. Actual VOC content < 0.1 lb/gal - used 0.1 as a conservative estimate.
Sulfur Dioxide (SO_2)	NA	NA				
Carbon Monoxide (CO)	NA	NA				
HAP:	NA	NA				No HAPs in Wax

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Shot Blaster

Processing Rate: 2.43 tons/hr
Operating Hours: 8760 hours per year
Control Device: CE024

Emission Point ID: S024
Emission Unit ID: EU024
SCC: 30900208
Year Installed: 1986
Design Capacity: 2.4 tons/hr

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})[1]	0.295	2.15	0.202	lb/ton	Site-specific emission factor from Title V Permit Application (3/1/2004) Hourly emission rate based on limit in Title V Permit Condition 4.1.9.	Assumes 99% capture/control efficiency of baghouse (accounted for in the factor).
Particulate Matter <10 microns (PM_{10FIL})[1]	0.295	2.15	0.202	lb/ton	assume equivalent to PM	
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)[1]	0.295	2.15	0.202	lb/ton	assume equivalent to PM	
Nitrogen Oxides (NO_x)	NA	NA				
Volatile Organic Compounds (VOC)	NA	NA				
Sulfur Dioxide (SO_2)	NA	NA				
Carbon Monoxide (CO)	NA	NA				
HAP:	NA	NA				

1. All PM is filterable only (this is a non-combustion process).

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Welding (Robot & Manual)

Welding Wire Usage: 526,000 lbs of wire per year
Control Device: None

Emission Point ID F025
Emission Unit ID: EU025
SCC Code: 30900500
Year Installed: 1986
Design Capacity: 10 tons/hr

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	0.312	1.368	5.2	lb/1000 lb	Assumed 100% of PM10	
Particulate Matter <10 microns (PM_{10FIL})	0.312	1.368	5.2	lb/1000 lb	AP-42, Table 12.19-1 GMAW (01/95)	E70S
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	0.312	1.368	5.2	lb/1000 lb	Assumed 100% of PM10	
Nitrogen Oxides (NO_X)	NA	NA				045 Superarc L-56
Volatile Organic Compounds (VOC)	NA	NA				
Sulfur Dioxide (SO_2)	NA	NA				
Carbon Monoxide (CO)	NA	NA				
HAP:						
Chromium (Cr)	6.0E-04	2.6E-03	0.01	lb/1000 lb	AP-42, Table 12.19-2 GMAW (01/95)	
Chromium (Cr-VI)						No AP-42 for Cr-VI
Cobalt (Co)	6.0E-04	2.6E-03	0.01	lb/1000 lb	AP-42, Table 12.19-2 GMAW (01/95)	
Lead (Pb)						No AP-42 for Pb
Manganese (Mn)	1.9E-01	8.4E-01	3.18	lb/1000 lb	AP-42, Table 12.19-2 GMAW (01/95)	
Nickel (Ni)	6.0E-04	2.6E-03	0.01	lb/1000 lb	AP-42, Table 12.19-2 GMAW (01/95)	

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Cold Cleaners

Hours of Operation:	8760	hrs/yr	**Emission Point ID:**	F026
Processing Rate:	0.30	gal/hr	**Emission Unit ID:**	EU026
Density	6.4 - 6.7	lb/gal	**SCC Code:**	40100203
VOC Content:	100.0	%	**Year Installed:**	1975
Control Device:	None		**Design Capacity:**	0.3 gal/hr

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	NA	NA				
Particulate Matter <10 microns (PM_{10FIL})	NA	NA				
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	NA	NA				
Nitrogen Oxides (NO_X)	NA	NA				
Volatile Organic Compounds (VOC)	2.05	8.99	6.84	lb/gal	SDS for Safety Kleen Premium Solvent	Assume 100% of solvent used evaporates
Sulfur Dioxide (SO_2)	NA	NA				
Carbon Monoxide (CO)	NA	NA				
HAP:						
N/A	0.0E+00	0.0E+00	0	wt. %		SDS for Safety Kleen Premium Solvent and Safety Kleen ArmaKleen

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Scrap Cutup Torches

Annual Processing Rate: 39,464 tons scrap
Annual Operating Rate: 8760 hrs per year
Design Rating: 2.6 MMBtu/hr
Fuel Usage: 22 MMscf/yr

Emission Point ID: F027
Emission Unit ID: EU027
SCC: 30390003

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	0.14	0.63	0.032	lb/ton	AP-42 Table 12.5.1-1 (04/09)	Factor for NG fired billet cutting torches
Particulate Matter <10 microns (PM_{10FIL})	0.14	0.63	0.032	lb/ton	AP-42 Table 12.5.1-1 (04/09)	assume equivalent to PM
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	0.14	0.63	0.032	lb/ton	AP-42 Table 12.5.1-1 (04/09)	assume equivalent to PM
Particulate Matter, Condensable (PM_{CON})	0.01	0.06	5.7	lb/MMscf	AP-42 Table 1.4-1 (07/98)	Factor for NG combustion (small boilers)
Nitrogen Oxides (NO_X)	0.25	1.12	100	lb/MMscf	AP-42 Table 1.4-1 (07/98)	Factor for NG combustion (small boilers)
Volatile Organic Compounds (VOC)	0.01	0.06	5.5	lb/MMscf	AP-42 Table 1.4-1 (07/98)	Factor for NG combustion (small boilers)
Sulfur Dioxide (SO_2)	0.002	0.007	0.6	lb/MMscf	AP-42 Table 1.4-2 (07/98)	Factor for NG combustion (small boilers)
Carbon Monoxide (CO)	0.21	0.94	84	lb/MMscf	AP-42 Table 1.4-2 (07/98)	Factor for NG combustion (small boilers)
HAP:	4.81E-03	2.11E-02	(See Table Below)		AP-42 Tables 1.4-3 and 1.4-4 (07/98)	

Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Scrap Cutup Torches

Annual Processing Rate:	39,464	tons scrap	**Emission Point ID:**	F027
Annual Operating Rate:	8760	hrs per year	**Emission Unit ID:**	EU027
Design Rating:	2.6	MMBtu/hr	**SCC:**	30390003
Fuel Usage:	22	MMscf/yr		

Natural Gas Combustion HAP Emissions[1]

Pollutant	CAS Number	(lb/MMscf)	Actual Emissions (lb/hr)	Actual Emissions (tpy)
Speciated Organics				
2-Methylnaphthalene	91-57-6	2.4E-05	6.1E-08	2.68E-07
3-Methylchloranthrene	56-49-5	1.8E-06	4.6E-09	2.01E-08
7,12-Dimethylbenz(a)anthracene	57-97-6	1.6E-05	4.1E-08	1.79E-07
Acenaphthene	83-32-9	1.8E-06	4.6E-09	2.01E-08
Acenaphthylene	203-96-8	1.8E-06	4.6E-09	2.01E-08
Anthracene	120-12-7	2.4E-06	6.1E-09	2.68E-08
Benz(a)anthracene	56-55-3	1.8E-06	4.6E-09	2.01E-08
Benzene	71-43-2	2.1E-03	5.4E-06	2.34E-05
Benzo(a)pyrene	50-32-8	1.2E-06	3.1E-09	1.34E-08
Benzo(b)fluoranthene	205-99-2	1.8E-06	4.6E-09	2.01E-08
Benzo(g,h,i)perylene	191-24-2	1.2E-06	3.1E-09	1.34E-08
Benzo(k)fluoranthene	205-82-3	1.8E-06	4.6E-09	2.01E-08
Chrysene	218-01-9	1.8E-06	4.6E-09	2.01E-08
Dibenzo(a,h) anthracene	53-70-3	1.2E-06	3.1E-09	1.34E-08
Dichlorobenzene	25321-22-6	1.2E-03	3.1E-06	1.34E-05
Fluoranthene	206-44-0	3.0E-06	7.6E-09	3.35E-08
Fluorene	86-73-7	2.8E-06	7.1E-09	3.13E-08
Formaldehyde	50-00-0	7.5E-02	1.9E-04	8.37E-04
Hexane	110-54-3	1.8E+00	4.6E-03	2.01E-02
Indo(1,2,3-cd)pyrene	193-39-5	1.8E-06	4.6E-09	2.01E-08
Napthalene	91-20-3	6.1E-04	1.6E-06	6.81E-06
Phenanthrene	85-01-8	1.7E-05	4.3E-08	1.90E-07
Pyrene	129-00-0	5.0E-06	1.3E-08	5.58E-08
Toluene	108-88-3	3.4E-03	8.7E-06	3.80E-05
Metals				
Arsenic	7440-38-2	2.0E-04	5.1E-07	2.23E-06
Beryllium	7440-41-7	1.2E-05	3.1E-08	1.34E-07
Cadmium	7440-43-9	1.1E-03	2.8E-06	1.23E-05
Chromium	7440-47-3	1.4E-03	3.6E-06	1.56E-05
Cobalt	7440-48-4	8.4E-05	2.1E-07	9.38E-07
Lead	7439-92-1	5.0E-04	1.3E-06	5.58E-06
Manganese	7439-96-5	3.8E-04	9.7E-07	4.24E-06
Mercury	7439-97-6	2.6E-04	6.6E-07	2.90E-06
Nickel	7440-02-0	2.1E-03	5.4E-06	2.34E-05
Selenium	7782-49-2	2.4E-05	6.1E-08	2.68E-07
Total HAP			**4.8E-03**	**2.11E-02**
Non-HAP Metals				
Barium	7440-39-3	4.4E-03	1.1E-05	4.91E-05
Copper	7440-50-8	8.50E-04	2.2E-06	9.49E-06
Molybdenum	7439-98-7	1.10E-03	2.8E-06	1.23E-05
Vanadium	7440-62-2	2.30E-03	5.9E-06	2.57E-05
Zinc	7440-66-6	2.90E-02	7.4E-05	3.24E-04

1. Emission factors obtained from AP-42 Section 1.4 Natural Gas Fired External Combustion Sources (07/98).

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Roadways

Paved Roads: 1.25 miles
Unpaved Roads: 1.9 miles
Vehicle Miles Traveled: 69,826 VMT/yr
Control Device: None

Emission Point ID: F028
Emission Unit ID: EU028
SCC Code: 30300831
Year Installed: 1952
Design Capacity: 3.2 miles

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})[1]	7.59	33.25		lb/VMT	See calculations below	VMT are estimated based on production rate
Particulate Matter <10 microns (PM_{10FIL})[1]	1.97	8.64		lb/VMT	See calculations below	VMT are estimated based on production rate
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)[1]	0.22	0.96		lb/VMT	See calculations below	VMT are estimated based on production rate
Nitrogen Oxides (NO_x)	NA	NA				
Volatile Organic Compounds (VOC)	NA	NA				
Sulfur Dioxide (SO_2)	NA	NA				
Carbon Monoxide (CO)	NA	NA				
HAP:	NA	NA				

1. All PM is filterable only (this is a non-combustion source).

Paved Roadways

Pollutant	k	sL	W	C	P	E	Road Length (miles)	(VMT) Vehicle Miles Traveled/yr	Applied Control Efficiency (%)	PM Emissions (lbs/yr)	PM Emissions (tpy)
	Particle Size Multiplier[1] (lbs/VMT)	Silt Loading[2] (gm/m^2)	Average Vehicle Weight[3] (tons)	Vehicle Fleet Emission Factor[4] (lb/VMT)	Precipitation Correction (# wet days/yr)	PM Annual Emission Factor[5] (lb/VMT)					
PM (filterable)	0.011	9.7	3.00	1.75	150	0.239	1.25	27,709	0	6,631	3.32
PM_{10} (filterable)	0.0022	9.7	3.00	1.75	150	0.048	1.25	27,709	0	1,326	0.66
$PM_{2.5}$ (filterable)	0.00054	9.7	3.00	1.75	150	0.012	1.25	27,709	0	326	0.16

Notes:

1 Particle Size Multiplier for Paved Road Equation from AP-42 Chapter 13.2.1, Table 13.2-1.1 (1/11).
2 Typical Silt Loading Value for Iron and Steel Production Facilities from AP-42 Chapter 13.2.1, Table 13.2.1-3 (1/11).
3 Average Vehicle Weight represents the "fleet" average weight of all vehicles traveling the specified road segment, in accordance with calculation methodology specified for Equations 1 and 2 from AP-42, Chapter 13.2.1, Section 13.2.1.3 (1/11).
4 Total Loading Factor for Iron & Steel Production from AP-42 Chapter 13.2.1, Table 13.2.1-3 (1/11).
5 Annual Emission Factor calculated in accordance with Equation 2 of AP-42 Chapter 13.2.1 (1/11). $E = [k (sL)^{0.91} * (W)^{1.02} * (1-P/4N)$, where N is the number of days in the period (per year in this case).

Unpaved Roadways

Pollutant	k	s	W	P	E	Road Length (miles)	(VMT) Vehicle Miles Traveled/yr	Applied Control Efficiency (%)	PM Emissions (lbs/yr)	PM Emissions (tpy)
	Particle Size Multiplier[1] (lbs/VMT)	Surface Material Silt Content[2] (%)	Average Vehicle Weight[3] (tons)	Precipitation Correction[4] (# wet days/yr)	PM Annual Emission Factor[5] (lb/VMT)					
PM (filterable)	4.9	6.0	3.0	150	1.777	1.9	42,117	20	59,865	29.93
PM_{10} (filterable)	1.5	6.0	3.0	150	0.473	1.9	42,117	20	15,954	7.98
$PM_{2.5}$ (filterable)	0.15	6.0	3.0	150	0.047	1.9	42,117	20	1,595	0.80

Notes:

1 Particle Size Multiplier for Industrial Roads Equation 1a from AP-42 Chapter 13.2.2, Table 13.2.2-2 (11/06).
2 Mean Silt Content for Iron & Steel Production Plant Roads from AP-42 Chapter 13.2.2, Table 13.2.2-1 (11/06).
3 Average Vehicle Weight represents the "fleet" average weight of all vehicles traveling the specified road segment, in accordance with calculation methodology specified for Equation 1a from AP-42, Chapter 13.2.2, Section 13.2.2.2 (11/06).
4 Mean number of days with 0.01 inch or more of precipitation for Huntington, WV from AP-42 Chapter 13.2.2, Figure 13.2.2-1 (11/06).
5 Annual Emission Factor calculated in accordance with Equations 1a and 2 of AP-42 Chapter 13.2.2 (11/06). $E = [k (s/12)a * (W/3)^b] * [(365-P/365)]$, where a = 0.9 and b = 0.45 from Table

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Baghouse Dust Handling
Emission Point ID: F029
Emission Unit ID: EU029

Annual Processing Rate: 15910 tons dust

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})[1]	0.15	0.67	0.084	lb/ton	AP-42, Section 13.2.4 (11/06)	assumes one transfer point from baghouse to truck
Particulate Matter <10 microns (PM_{10FIL})[1]	0.07	0.32	0.040	lb/ton	AP-42, Section 13.2.4 (11/06)	assumes one transfer point from baghouse to truck
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)[1]	0.01	0.05	0.006	lb/ton	AP-42, Section 13.2.4 (11/06)	assumes one transfer point from baghouse to truck
Nitrogen Oxides (NO_X)	NA	NA				
Volatile Organic Compounds (VOC)	NA	NA				
Sulfur Dioxide (SO_2)	NA	NA				
Carbon Monoxide (CO)	NA	NA				
HAP:						
Arsenic (As)	7.63E-07	3.34E-06	5.00E-04	wt. %	2018 Dust Analysis (1 sample)	
Beryllium (Be)	NA	NA	(Already accounted for in EAF #1 & EAF #2 calculations)			
Cadmium (Ca)	1.95E-04	8.56E-04	1.28E-01	wt. %	Max of 2019 Monthly Dust Analyses	
Chromium (Cr)	3.63E-04	1.59E-03	2.38E-01	wt. %	Max of 2019 Monthly Dust Analyses	
Fluoride (F)	NA	NA	(Already accounted for in EAF #1 & EAF #2 calculations)			Not a listed HAP
Lead (Pb)	2.43E-03	1.06E-02	1.59E+00	wt. %	Max of 2019 Monthly Dust Analyses	
Mercury (Hg)	3.05E-08	1.34E-07	2.00E-05	wt. %	2018 Dust Analysis (1 sample)	
Manganese (Mn)	7.45E-03	3.26E-02	4.88E+00	wt. %	Max of 2019 Monthly Dust Analyses	
Nickel (Ni)	3.66E-05	1.60E-04	2.40E-02	wt. %	Max of 2019 Monthly Dust Analyses	
Zinc (Zn)	4.98E-02	2.18E-01	3.26E+01	wt. %	Max of 2019 Monthly Dust Analyses	Not a listed HAP

1. All PM is filterable only (this is a non-combustion source).
2. Fugitive emission factors are calculated using AP-42 Section 13.2.4 assuming one transfer from the baghouse collection hoppers to the truck.

$$E = k(0.0032)\frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} (lb/ton)$$

k =	0.74	PM - (AP-42, Section 13.2.4 (11/06), for Particle Size < 30 mm)
	0.35	PM_{10} - (AP-42, Section 13.2.4 (11/06), for Particle Size < 10 mm)
	0.053	$PM_{2.5}$ - (AP-42, Section 13.2.4 (11/06), for Particle Size < 2.5 mm)
Mean Wind Speed (mph): U =	6.52	40-yr average for Huntington, WV (from http://www.ncdc.noaa.gov/oa/climate/online/ccd/avgwind.html)
Baghouse Dust Moisture Content (%) =	0.2	per AP-42, Section 13.2.4, Table 13.2.4-1 (11/06)

Type of Material	PM Emission Factor (lb/ton)	PM_{10} Emission Factor (lb/ton)	$PM_{2.5}$ Emission Factor (lb/ton)
Baghouse Dust	0.08404	0.03975	0.00602

Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Baghouse Dust Handling

Annual Processing Rate: 15910 tons dust

Emission Point ID: F029
Emission Unit ID: EU029

Month	% Zinc (Zn)	% Lead (Pb)	% Cadmium (Cd)	% Manganese (Mn)	% Chromium (Cr)	% Nickel (Ni)	% Arsenic (As)	% Mercury (Hg)
January	28.52	1.20	0.04	4.88	0.24	0.02	5.00E-04	2.00E-05
February	26.50	0.95	0.01	4.47	0.20	0.02		
March	28.32	1.58	0.13	4.47	0.22	0.02		
April	26.72	1.19	0.05	4.58	0.21	0.02		
May	26.64	1.42	0.05	4.69	0.23	0.02		
June	0.00	0.00	0.00	0.00	0.00	0.00		
July	29.88	1.59	0.06	4.44	0.21	0.02		
August	32.63	1.59	0.06	4.21	0.19	0.02		
September	29.91	1.39	0.05	3.96	0.20	0.02		
October	30.58	1.45	0.06	4.15	0.19	0.02		
November	31.97	1.42	0.06	3.80	0.19	0.02		
December	29.81	1.45	0.05	3.62	0.17	0.02		
Max	**32.63**	**1.59**	**0.13**	**4.88**	**0.24**	**0.02**	**5.00E-04**	**2.00E-05**

1. Zn, Pb, Cd, Mn, Cr, Ni - Dust analysis performed on a monthly composite sample and results are presented in percent on a dry weight basis.
2. As - This is not analyzed monthly - all available 2019 data used to calculate annual average.
3. Hg - This is only analyzed once per year for TRI reporting purposes.

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Alloy Handling

Emission Point ID: F030
Emission Unit ID: EU030

Annual Processing Rate: 8,991 tons of alloy

Pollutant	Potential Emissions (tpy)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})[1]	0.12	0.54	0.120	lb/ton	AP-42, Section 11.24-2 (01/95)	assumes one transfer, fugitive emissions
Particulate Matter <10 microns (PM_{10FIL})[1]	0.06	0.27	0.060	lb/ton	AP-42, Section 11.24-2 (01/95)	assumes one transfer, fugitive emissions
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)[1]	0.06	0.27	0.060	lb/ton	AP-42, Section 11.24-2 (01/95)	assumes one transfer, fugitive emissions
Nitrogen Oxides (NO_X)	NA	NA				
Volatile Organic Compounds (VOC)	NA	NA				
Sulfur Dioxide (SO_2)	NA	NA				
Carbon Monoxide (CO)	NA	NA				
HAP:	NA	NA				

1. All PM is filterable only (this is a non-combustion source).
2. Emissions of HAPs from this source have been determined to be negligible and are therefore not included in this inventory.

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: East Cooling Towers (2)

Recirculation Rate: 1800 gpm
Operating Hours: 8760 hrs/yr

Emission Point ID: S031
Emission Unit ID: EU031
SCC Code: 30600702

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})[1]	0.42	1.83	0.019	lb/10^3 gal	Assume Equivalent to PM10	Assumes equivalent to PM10
Particulate Matter <10 microns (PM_{10FIL})[1]	0.42	1.83	0.019	lb/10^3 gal	AP-42 Table 13.4-1 (09/95)	Uses site-specific conductivity data
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)[1]	0.42	1.83	0.019	lb/10^3 gal	Assume Equivalent to PM10	Assumes equivalent to PM10
Nitrogen Oxides (NO_X)	NA	NA				
Volatile Organic Compounds (VOC)	NA	NA				
Sulfur Dioxide (SO_2)	NA	NA				
Carbon Monoxide (CO)	NA	NA				
HAP:	NA	NA				

1. All PM is filterable only (this is a non-combustion source).

COOLING TOWER	WATER SOURCE	HOURS OF OPERATION	RECIRCULATION RATE [gpm]	TOTAL DISSOLVED SOLIDS AP-42[1] [PPM]	TOTAL DISSOLVED SOLIDS SWVA[2] [PPM]	DRIFT LOSS AP-42[3] [lb/10^3 gal]	DRIFT LOSS AP-42[3] [gpm]	PM10 EMISSION AP-42 [lb/10^3 gal]	AP-42 PM10 [lb/hr]	AP-42 PM10 [TPY]
East Cooling Towers	City Water	8760	1,800	12,000	413	1.7	0.4	0.019	0.42	1.83

1. From Table 13.4-1 *Particulate Emissions Factors for Wet Cooling Towers* for Induced Draft Cooling Towers of AP-42 (September 1995).
2. Total disolved solids (TDS) converted from site specific conductivity measurements (TDS (ppm) = 0.67 * conductivity (mmho)) as provided by GE Water and Process Technologies
3. Density of water is approximately 8.345 lbs/gal.

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Melt Shop Cooling Towers (3)

Recirculation Rate: 5,273 gpm
Operating Hours: 8760 hrs/yr

Emission Point ID: S032
Emission Unit ID: EU032
SCC Code: 30600702

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})[1]	1.22	5.36	0.019	lb/10^3 gal	PM = PM10	Assumes equivalent to PM10
Particulate Matter <10 microns (PM_{10FIL})[1]	1.22	5.36	0.019	lb/10^3 gal	AP-42 Table 13.4-1 (09/95)	Uses site-specific conductivity data
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)[1]	1.22	5.36	0.019	lb/10^3 gal	PM2.5 = PM10	Assumes equivalent to PM10
Nitrogen Oxides (NO_X)	NA	NA				
Volatile Organic Compounds (VOC)	NA	NA				
Sulfur Dioxide (SO_2)	NA	NA				
Carbon Monoxide (CO)	NA	NA				
HAP:	NA	NA				

1. All PM is filterable only (this is a non-combustion source).

COOLING TOWER	WATER SOURCE	HOURS OF OPERATION	RECIRCULATION RATE [gpm]	TOTAL DISSOLVED SOLIDS AP-42[1] [PPM]	TOTAL DISSOLVED SOLIDS SWVA[2] [PPM]	DRIFT LOSS AP-42[3] [lb/10^3 gal]	DRIFT LOSS AP-42[3] [gpm]	PM10 EMISSION AP-42 [lb/10^3 gal]	AP-42 PM10 [lb/hr]	AP-42 PM10 [TPY]
Melt Shop Cooling Towers	City Water	8760	5,273	12,000	413	1.7	1.1	0.019	1.22	5.36

1. From Table 13.4-1 *Particulate Emissions Factors for Wet Cooling Towers* for Induced Draft Cooling Towers of AP-42 (September 1995).
2. Total disolved solids (TDS) converted from site specific conductivity measurements (TDS (ppm) = 0.67 * conductivity (mmho)) as provided by GE Water and Process Technologies
3. Density of water is approximately 8.345 lbs/gal.

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Space Heaters

Hours of Operation:	8760	hrs/yr	**Emission Point ID:**	S033
Rated Capacity:	5.0	MMBtu/hr	**Emission Unit ID:**	EU033
Fuel Usage:	42.9	MMscf/yr	**SCC Code:**	10200603

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	0.01	0.04	1.9	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
Particulate Matter <10 microns (PM_{10FIL})	0.01	0.04	1.9	lb/MMscf	AP-42 Table 1.4-2 (07/98)	assumes equivalent to PM
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	0.01	0.04	1.9	lb/MMscf	AP-42 Table 1.4-2 (07/98)	assumes equivalent to PM
Particulate Matter, Condensable (PM_{CON})	0.03	0.12	5.7	lb/MMscf	AP-42 Table 1.4-1 (07/98)	
Nitrogen Oxides (NO_X)	0.49	2.15	100	lb/MMscf	AP-42 Table 1.4-1 (07/98)	
Volatile Organic Compounds (VOC)	0.03	0.12	5.5	lb/MMscf	AP-42 Table 1.4-1 (07/98)	
Sulfur Dioxide (SO_2)	0.00	0.01	0.6	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
Carbon Monoxide (CO)	0.41	1.80	84	lb/MMscf	AP-42 Table 1.4-2 (07/98)	
HAP:	9.26E-03	4.05E-02	(See Table Below)		AP-42 Tables 1.4-3 and 1.4-4 (07/98)	

Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Space Heaters

Hours of Operation:	8760	hrs/yr	**Emission Point ID:**	S033
Rated Capacity:	5.0	MMBtu/hr	**Emission Unit ID:**	EU033
Fuel Usage:	42.9	MMscf/yr	**SCC Code:**	10200603

Natural Gas Combustion HAP Emissions[1]

Pollutant	CAS Number	(lb/MMscf)	Emissions (lb/hr)	Potential Emissions (tpy)
Speciated Organics				
2-Methylnaphthalene	91-57-6	2.4E-05	1.2E-07	5.15E-07
3-Methylchloranthrene	56-49-5	1.8E-06	8.8E-09	3.86E-08
7,12-Dimethylbenz(a)anthracene	57-97-6	1.6E-05	7.8E-08	3.44E-07
Acenaphthene	83-32-9	1.8E-06	8.8E-09	3.86E-08
Acenaphthylene	203-96-8	1.8E-06	8.8E-09	3.86E-08
Anthracene	120-12-7	2.4E-06	1.2E-08	5.15E-08
Benz(a)anthracene	56-55-3	1.8E-06	8.8E-09	3.86E-08
Benzene	71-43-2	2.1E-03	1.0E-05	4.51E-05
Benzo(a)pyrene	50-32-8	1.2E-06	5.9E-09	2.58E-08
Benzo(b)fluoranthene	205-99-2	1.8E-06	8.8E-09	3.86E-08
Benzo(g,h,i)perylene	191-24-2	1.2E-06	5.9E-09	2.58E-08
Benzo(k)fluoranthene	205-82-3	1.8E-06	8.8E-09	3.86E-08
Chrysene	218-01-9	1.8E-06	8.8E-09	3.86E-08
Dibenzo(a,h) anthracene	53-70-3	1.2E-06	5.9E-09	2.58E-08
Dichlorobenzene	25321-22-6	1.2E-03	5.9E-06	2.58E-05
Fluoranthene	206-44-0	3.0E-06	1.5E-08	6.44E-08
Fluorene	86-73-7	2.8E-06	1.4E-08	6.01E-08
Formaldehyde	50-00-0	7.5E-02	3.7E-04	1.61E-03
Hexane	110-54-3	1.8E+00	8.8E-03	3.86E-02
Indo(1,2,3-cd)pyrene	193-39-5	1.8E-06	8.8E-09	3.86E-08
Napthalene	91-20-3	6.1E-04	3.0E-06	1.31E-05
Phenanthrene	85-01-8	1.7E-05	8.3E-08	3.65E-07
Pyrene	129-00-0	5.0E-06	2.5E-08	1.07E-07
Toluene	108-88-3	3.4E-03	1.7E-05	7.30E-05
Metals				
Arsenic	7440-38-2	2.0E-04	9.8E-07	4.29E-06
Beryllium	7440-41-7	1.2E-05	5.9E-08	2.58E-07
Cadmium	7440-43-9	1.1E-03	5.4E-06	2.36E-05
Chromium	7440-47-3	1.4E-03	6.9E-06	3.01E-05
Cobalt	7440-48-4	8.4E-05	4.1E-07	1.80E-06
Lead	7439-92-1	5.0E-04	2.5E-06	1.07E-05
Manganese	7439-96-5	3.8E-04	1.9E-06	8.16E-06
Mercury	7439-97-6	2.6E-04	1.3E-06	5.58E-06
Nickel	7440-02-0	2.1E-03	1.0E-05	4.51E-05
Selenium	7782-49-2	2.4E-05	1.2E-07	5.15E-07
Total HAP			**9.3E-03**	**4.05E-02**
Non-HAP Metals				
Barium	7440-39-3	4.4E-03	2.2E-05	9.45E-05
Copper	7440-50-8	8.50E-04	4.2E-06	1.83E-05
Molybdenum	7439-98-7	1.10E-03	5.4E-06	2.36E-05
Vanadium	7440-62-2	2.30E-03	1.1E-05	4.94E-05
Zinc	7440-66-6	2.90E-02	1.4E-04	6.23E-04

1. Emission factors obtained from AP-42 Section 1.4 Natural Gas Fired External Combustion Sources (07/98).

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Emergency Generator #1, diesel-fired

Hours of Operation:	500			**Emission Point ID:**	EU034
Rated Capacity:	97	HP		**Emission Unit ID:**	S034
Brake-Specific Fuel Consumption:	7000	Btu/bhp-hr	AP-42, Table 3.3	**SCC Code:**	20200102
Fuel Usage:	4.92	gallons/hour			
Total Annual Fuel Usage:	2,460	gallons/year			

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	0.21	0.05	0.31	lb/MMBtu	AP-42 Table 3.3-1 (10/96)	assume equivalent to PM_{10}
Particulate Matter <10 microns (PM_{10FIL})	0.21	0.05	0.31	lb/MMBtu	AP-42 Table 3.3-1 (10/96)	
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	0.21	0.05	0.31	lb/MMBtu	AP-42 Table 3.3-1 (10/96)	assume equivalent to PM_{10}
Particulate Matter, Condensable (PM_{CON})	0.63	0.16	0.93	lb/MMBtu	Ratio of PMCON to PMFIL for natural gas combustion	
Nitrogen Oxides (NO_X)	2.99	0.75	4.41	lb/MMBtu	AP-42 Table 3.3-1 (10/96)	
Volatile Organic Compounds (VOC)	0.24	0.06	0.36	lb/MMBtu	AP-42 Table 3.3-1 (10/96)	
Sulfur Dioxide (SO_2)	0.20	0.05	0.29	lb/MMBtu	AP-42 Table 3.3-1 (10/96)	
Carbon Monoxide (CO)	0.65	0.16	0.95	lb/MMBtu	AP-42 Table 3.3-1 (10/96)	
HAP:	4.38E-03	1.10E-03	(See Table Below)		AP-42 Table 3.3-2 (10/96)	

1. All PM is filterable only (does not include condensable particulate matter) unless otherwise specified.
2. Diesel heat input per 40 CFR 98 (mmbtu/1,000 gal): 138

Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Emergency Generator #1, diesel-fired

Hours of Operation:	500		
Rated Capacity:	97	HP	
Brake-Specific Fuel Consumption:	7000	Btu/bhp-hr	AP-42, Table 3.3
Fuel Usage:	4.92	gallons/hour	
Total Annual Fuel Usage:	2,460	gallons/year	

Emission Point ID: EU034
Emission Unit ID: S034
SCC Code: 20200102

Diesel Internal Combustion Engine HAP Emissions[1]

Pollutant	Emission Factor (lb/MMbtu)	Potential Emissions (lb/hr)	Potential Emissions (tpy)
Speciated Organics			
Benzene	9.33E-04	6.34E-04	1.58E-04
Toluene	4.09E-04	2.78E-04	6.94E-05
Xylenes	2.85E-04	1.94E-04	4.84E-05
Propylene	2.58E-03	1.75E-03	4.38E-04
1,3-Butadiene	3.91E-05	2.65E-05	6.64E-06
Formaldehyde	1.18E-03	8.01E-04	2.00E-04
Acetaldehyde	7.67E-04	5.21E-04	1.30E-04
Acrolein	9.25E-05	6.28E-05	1.57E-05
Polycyclic aromatic hydrocarbons (PAH)			
Naphthalene	8.48E-05	5.76E-05	1.44E-05
Acenaphthylene	5.06E-06	3.44E-06	8.59E-07
Acenaphthene	1.42E-06	9.64E-07	2.41E-07
Fluorene	2.92E-05	1.98E-05	4.96E-06
Phenanthrene	2.94E-05	2.00E-05	4.99E-06
Anthracene	1.87E-06	1.27E-06	3.17E-07
Fluoranthene	7.61E-06	5.17E-06	1.29E-06
Pyrene	4.78E-06	3.25E-06	8.11E-07
Benzo(a)anthracene	1.68E-06	1.14E-06	2.85E-07
Chrysene	3.53E-07	2.40E-07	5.99E-08
Benzo(b)fluoranthene	9.91E-08	6.73E-08	1.68E-08
Benzo(k)fluoranthene	1.55E-07	1.05E-07	2.63E-08
Benzo(a)pyrene	1.88E-07	1.28E-07	3.19E-08
Indeno(1,2,3-cd)pyrene	3.75E-07	2.55E-07	6.37E-08
Dibenz(a,h)anthracene	5.83E-07	3.96E-07	9.90E-08
Benzo(g,h,I)perylene	4.89E-07	3.32E-07	8.30E-08
Total HAP		**4.4E-03**	**1.10E-03**

1. Emission factors obtained from AP-42 Section 3.3 Gasoline and Diesel Industrial Engines.
2. Diesel heat input per 40 CFR 98 (mmbtu/1,000 gal):

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Emergency Generator #2, natural gas-fired

Hours of Operation:	500	Hours		**Emission Point ID:**	S035
Rated Capacity:	254	HP		**Emission Unit ID:**	EU035
Brake-Specific Fuel Consumption:	7000	Btu/bhp-hr	AP-42, Table 3.3-1.		
Fuel Usage:	1.78	MMBtu/hr			
Fuel Usage:	890.05	MMBtu/yr			
Engine Type:	4SRB				

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	0.02	4.23E-03	9.50E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	Assumes equivalent to PM_{10}
Particulate Matter <10 microns (PM_{10FIL})	0.02	4.23E-03	9.50E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	0.02	4.23E-03	9.50E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Particulate Matter, Condensable (PM_{CON})	0.02	4.41E-03	9.91E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Nitrogen Oxides (NO_X)	3.93	0.98	2.21	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Volatile Organic Compounds (VOC)	0.05	0.01	2.96E-02	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Sulfur Dioxide (SO_2)	0.001	2.62E-04	5.88E-04	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Carbon Monoxide (CO)	6.62	1.66	3.72	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
HAP:						
1,1,2,2-Tetrachloroethane	4.50E-05	1.13E-05	2.53E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
1,1,2-Trichloroethane	2.72E-05	6.81E-06	1.53E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
1,3-Butadiene	1.18E-03	2.95E-04	6.63E-04	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
1,3-Dichloropropene	2.26E-05	5.65E-06	1.27E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Acetaldehyde	4.97E-03	1.24E-03	2.79E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Acrolein	4.68E-03	1.17E-03	2.63E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Benzene	2.81E-03	7.03E-04	1.58E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Carbon Tetrachloride	3.15E-05	7.88E-06	1.77E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Chlorobenzene	2.30E-05	5.74E-06	1.29E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Chloroform	2.44E-05	6.10E-06	1.37E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Ethylbenzene	4.41E-05	1.10E-05	2.48E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Ethylene Dibromide	3.79E-05	9.48E-06	2.13E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Formaldehyde	3.65E-02	9.12E-03	2.05E-02	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Methanol	5.45E-03	1.36E-03	3.06E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Methylene Chloride	7.33E-05	1.83E-05	4.12E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Napthalene	1.73E-04	4.32E-05	9.71E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
PAH	2.51E-04	6.27E-05	1.41E-04	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Styrene	2.12E-05	5.30E-06	1.19E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Toluene	9.93E-04	2.48E-04	5.58E-04	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Vinyl Chloride	1.28E-05	3.20E-06	7.18E-06	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Xylene	3.47E-04	8.68E-05	1.95E-04	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	

1. Natural Gas Heating Value (Btu/scf): 1020

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Emergency Generator #3, natural gas-fired

Hours of Operation:	500	Hours		**Emission Point ID:**	S036
Rated Capacity:	268	HP		**Emission Unit ID:**	EU036
Brake-Specific Fuel Consumption:	7000	Btu/bhp-hr	AP-42, Table 3.3-1.		
Fuel Usage:	1.88	MMBtu/hr			
Fuel Usage:	938.00	MMBtu/yr			
Engine Type:	4SRB				

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	0.02	4.46E-03	9.50E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	Assumes equivalent to PM_{10}
Particulate Matter <10 microns (PM_{10FIL})	0.02	4.46E-03	9.50E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	0.02	4.46E-03	9.50E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Particulate Matter, Condensable (PM_{CON})	0.02	4.65E-03	9.91E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Nitrogen Oxides (NO_X)	4.15	1.04	2.21	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Volatile Organic Compounds (VOC)	0.06	0.01	2.96E-02	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Sulfur Dioxide (SO_2)	0.001	2.76E-04	5.88E-04	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Carbon Monoxide (CO)	6.98	1.74	3.72	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
HAP:						
1,1,2,2-Tetrachloroethane	4.75E-05	1.19E-05	2.53E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
1,1,2-Trichloroethane	2.87E-05	7.18E-06	1.53E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
1,3-Butadiene	1.24E-03	3.11E-04	6.63E-04	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
1,3-Dichloropropene	2.38E-05	5.96E-06	1.27E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Acetaldehyde	5.23E-03	1.31E-03	2.79E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Acrolein	4.93E-03	1.23E-03	2.63E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Benzene	2.96E-03	7.41E-04	1.58E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Carbon Tetrachloride	3.32E-05	8.30E-06	1.77E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Chlorobenzene	2.42E-05	6.05E-06	1.29E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Chloroform	2.57E-05	6.43E-06	1.37E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Ethylbenzene	4.65E-05	1.16E-05	2.48E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Ethylene Dibromide	4.00E-05	9.99E-06	2.13E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Formaldehyde	3.85E-02	9.61E-03	2.05E-02	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Methanol	5.74E-03	1.44E-03	3.06E-03	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Methylene Chloride	7.73E-05	1.93E-05	4.12E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Napthalene	1.82E-04	4.55E-05	9.71E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
PAH	2.65E-04	6.61E-05	1.41E-04	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Styrene	2.23E-05	5.58E-06	1.19E-05	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Toluene	1.05E-03	2.62E-04	5.58E-04	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Vinyl Chloride	1.35E-05	3.37E-06	7.18E-06	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	
Xylene	3.66E-04	9.15E-05	1.95E-04	lb/MMBtu	AP-42 Table 3.2-3 (7/00)	

1. Natural Gas Heating Value (Btu/scf): 1020

Client Name: Steel of West Virginia
Facility Name: Huntington Facility
Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Melt Shop Fugitives

Annual Processing Rate: 350,400 tons of steel produced

Emission Point ID: F005
Emission Unit ID: Various

Pollutant	Potential Emissions (lb/hr)	Potential Emissions (tpy)	Emission Factor	Emission Factor Units	Emission Factor Source	Notes
Criteria:						
Particulate Matter, Filterable (PM_{FIL})	2.64	11.56	(see calculation table below)		Capture/control efficiencies applied to AP-42 Table 12.5-1 (01/95)	Fugitives from entire Melt Shop
Particulate Matter <10 microns (PM_{10FIL})	2.01	8.79	(see calculation table below)		76% of total PM is PM_{10} - AP-42 Table 12.5-2 (01/95)	58% in TV Application (AP-42 uncontrolled factor?)
Particulate Matter < 2.5 microns ($PM_{2.5FIL}$)	1.95	8.56	(see calculation table below)		74% of total PM is $PM_{2.5}$ - AP-42 Table 12.5-2 (01/95)	
Particulate Matter, Condensable (PM_{CON})	0.91	3.99	0.02	lb/ton	Ratio of baghouse PMCON to PMFIL	
Nitrogen Oxides (NO_X)	NA	NA				
Volatile Organic Compounds (VOC)	NA	NA				
Sulfur Dioxide (SO_2)	NA	NA				
Carbon Monoxide (CO)	NA	NA				
HAP:						
Arsenic (As)	1.32E-05	5.78E-05	5.00E-04	wt. %	2018 Dust Analysis (1 sample)	6.2E-06 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Beryllium (Be)	(Already accounted for in EAF #1 & EAF #2 calculations)					
Cadmium (Ca)	3.38E-03	1.48E-02	1.28E-01	wt. %	Max of 2019 Monthly Dust Analyses	5.0E-06 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Chromium (Cr)	6.28E-03	2.75E-02	2.38E-01	wt. %	Max of 2019 Monthly Dust Analyses	3.5E-06 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Fluoride (F)	(Already accounted for in EAF #1 & EAF #2 calculations)					Not a listed HAP
Lead (Pb)	4.20E-02	1.84E-01	1.59E+00	wt. %	Max of 2019 Monthly Dust Analyses	0.00056 lb/ton AP-42 Table 12.5.1-7 (04/09)
Mercury (Hg)	5.28E-07	2.31E-06	2.00E-05	wt. %	2018 Dust Analysis (1 sample)	1.1E-04 lb/ton in AP-42 Table 12.5.1-9 (04/09) - Uncontrolled (particulate & vapor?)
Manganese (Mn)	1.29E-01	5.65E-01	4.88E+00	wt. %	Max of 2019 Monthly Dust Analyses	3.0E-04 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Nickel (Ni)	6.34E-04	2.78E-03	2.40E-02	wt. %	Max of 2019 Monthly Dust Analyses	5.5E-05 lb/ton in AP-42 Table 12.5.1-9 (04/09)
Zinc (Zn)	8.61E-01	3.77E+00	3.26E+01	wt. %	Max of 2019 Monthly Dust Analyses	Not a listed HAP

Project Description: Title V Operating Permit Renewal
Date: 5/1/2020

Process: Melt Shop Fugitives

Annual Processing Rate: 350,400 tons of steel produced

Emission Point ID: F005
Emission Unit ID: Various

Month	% Zinc (Zn)	% Lead (Pb)	% Cadmium (Cd)	% Manganese (Mn)	% Chromium (Cr)	% Nickel (Ni)	% Arsenic (As)	% Mercury (Hg)
January	28.5	1.2	0.0390	4.9	0.238	0.0230	5.00E-04	2.00E-05
February	26.5	1.0	0.0140	4.5	0.199	0.0230	-	-
March	28.3	1.6	0.1280	4.5	0.221	0.0190	-	-
April	26.7	1.2	0.0490	4.6	0.211	0.0180	-	-
May	26.6	1.4	0.0530	4.7	0.226	0.0240	-	-
June	0.0	0.0	0.0000	0.0	0.000	0.0000	-	-
July	29.9	1.6	0.0590	4.4	0.214	0.0180	-	-
August	32.6	1.6	0.0600	4.2	0.192	0.0170	-	-
September	29.9	1.4	0.0540	4.0	0.199	0.0190	-	-
October	30.6	1.4	0.0550	4.1	0.194	0.0170	-	-
November	32.0	1.4	0.0570	3.8	0.185	0.0170	-	-
December	29.8	1.4	0.0520	3.6	0.173	0.0170	-	-
Max	**32.63**	**1.59**	**0.13**	**4.88**	**0.24**	**0.02**	**5.00E-04**	**2.00E-05**

1. Zn, Pb, Cd, Mn, Cr, Ni - Dust analysis performed on a monthly composite sample and results are presented in percent on a dry weight basis.
2. As - This is not analyzed monthly - all available 2019 data used to calculate annual average.
3. Hg - This is only analyzed once per year for TRI reporting purposes.

Fugitive PM Emission Factor (Post-Melt Shop Canopy Upgrades in July 2010)

Furnace	Operating Phase	Average Liquid Steel Produced [tpy]	Uncontrolled PM Emissions[1] [lb/ton]	Uncontrolled PM Emissions [lb/yr]	EAF Hood Capture Efficiency [%]	PM Emissions to EAF Hood [lb/yr]	PM Emissions to Canopy Hood [lb/yr]	Canopy Hood Capture Efficiency [%]	PM Emissions to Building [lb/yr]	Building Capture Efficiency [%]	PM Emissions to Roof Monitor [lb/yr]
EAFs #1 & 2	Melting & Refining	350,400	38	13,315,200	95	12,649,440	665,760	90	66,576	80	13,315
	Charging & Tapping		1.4	490,560	0	-	490,560	90	49,056	80	9,811
	Total		*39.4*	*13,805,760*	---	*12,649,440*	*1,156,320*	---	*115,632*	---	*23,126*
										TSP	**11.56**
											TPY

[1]Emission factors are uncontrolled total particulate from AP-42 Table 12.5-1 (01/95).

[2]Canopy hood and building capture efficiencies are from U.S. EPA's background development documents for the New Source Performance Standards (NSPS) for Electric Arc Furnaces under 40 CFR 60 Subparts AA/Aaa (EPA-450/3-82-020a, July 1983). SWVA upgraded their single canopy hood configuration (average capture efficiency of 80%) to a larger segmented canopy hood in summer 2010 (average capture efficiency of 90%). They also completed building improvements during that project, including new steel sheeting of the entire melt shop building, resulting in an estimate 10% improvement in overall building capture efficiency.